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LEADERSHIP IN EDUCATION

THE need to maintain a steady flow of fresh, young leadership into the bloodstream of the educational profession is no new problem; but, under the pressure of many other seemingly more pressing needs, this one is frequently overlooked. It is not to be denied that at the moment the recruitment of teachers and other school personnel demands the attention of everyone interested in the profession. Nevertheless, from the long-range point of view, no concern is more imperative than making certain that imaginative and competent persons are prepared for, and find their way into, positions of influence in the school business. The writer believes that the strength and the vitality of the profession rest fundamentally in what we are prone to call the "ordinary" classroom teacher. Without leadership, however, to encourage and to co-ordinate the contributions of the teachers and to dream the dreams for which busy teachers may have little time, the foresight of our profession

may be dimmed. The problem of developing professional leadership is many-sided, but there are three aspects of it which may be noted.

There is, in the first place, a need to help young people of promise early in their school years to consider as possible careers leadership positions in school work. This is not to say that the typical ladder of training and experience which now must be climbed in reaching professional eminence can or ought to be abandoned. The difficulty is that many who ought to climb do not know about the possibilities at the top in time to enable them to plan their education and experience most efficiently. This point is made with particular reference to the field of school administration by Walter D. Cocking, writing in the March issue of the *School Executive*:

As I think back, I cannot recall a high-school Senior who wanted to be a school administrator. On the other hand, I have talked with many, as I am sure you have, who knew they wanted to be doctors or lawyers, farmers or engineers, bankers or preachers. Yet, we know that good school administrators

are greatly needed; we know that school administration is an honorable field of endeavor; we believe that selection of a vocation in time to prepare adequately for it is desirable both for the individual concerned and for the vocation he plans to enter. Why is it, then, that more school administrators do not advise high-school Seniors to look to school administration as an attractive vocation?

The argument probably most frequently advanced is the limited financial possibilities to be found in school work. But such reasoning is evidently unsound. A recent nationwide survey by the Institute of Public Opinion, under the sponsorship of *Scholastic* magazine, showed that high-school students put *money* at the very bottom of their list of ultimate aims in life. In fact, only 4 per cent of 93,174 students placed it at the top of the list. On the other hand, 44 per cent expressed their chief aim as a desire "to live a simple but secure and happy life without making a lot of money or becoming famous." Another 10 per cent voted "to serve society and help to improve the health or welfare of my fellow-men." Yet another 15 per cent voted "to be a prominent and respected member of my community."

It would seem then that high-school students are willing to consider such a vocation as school administration as their life's choice. The responsibility rests upon the school administrator to present to high-school youth the merits and opportunities of school administration as a profession.

It is possible to discover whether high-school Seniors have the traits and qualities which if properly developed would indicate success as school administrators. There are, of course, certain traits every person should possess regardless of his vocational choice. Among these might be listed honesty, diligence, integrity, willingness to work, and stick-to-it-iveness. If one is to consider certain types of vocations, such as law, medicine, engineering, public administration, for example, various special traits emerge

as necessary and vital to success. Among such might be listed broad culture, scholarship, ability to plan, to organize, to communicate effectively. These will be recognized as common only to certain individuals, and hence selective. If, then, one considers those traits which are particularly applicable to school administration, certain other traits, still more selective, will be recognized. . . .

Let us locate those youth who possess traits specially applicable to school administration. Let us present to those youth *now* the possibilities, opportunities, and responsibilities of school administration. Let us give them the facts *now* which they need to decide whether they will prepare themselves as school administrators. Let us assist them *now* in every way possible to prepare themselves adequately for our profession.

A second aspect of the problem is the necessity for helping potential young leaders find ways and means of continuing their education. The responsibility here is at least twofold. Administrators and others who have young people working on their staffs ought, as part of their professional duty, to assist their more outstanding co-workers to prepare themselves for advancement in the profession. To be sure, many administrators accept this responsibility, but all too often a young staff member who finds ways of continuing his professional studies or of broadening his professional experience does so in spite of his administrator's indifference rather than because of his administrator's help. At the same time, schools and departments of education ought to be more aggressive in searching out the best potential leaders to benefit from scholarship funds and other sources of assistance.

Of course schools are careful to award their grants to the best people available, but ordinarily they are available only in the sense of having of their own volition applied for admission or help. Although such voluntary action is sometimes an indication of the worth of the student, an active search for undiscovered talent would be a most rewarding undertaking for both the universities and the profession.

The third aspect to be commented on here relates to finding and placing in significant educational positions young people who are ready for such positions but who through the accidents of human existence find themselves in remote places or in undistinguished school systems or, perhaps, without influential sponsors. Anyone who has been active in filling important positions on a school or college faculty recognizes a tendency to turn for help to a limited number of contacts, personal or institutional. In planning programs of almost any type, the administrator seems to be inclined to fill the assignments with well-known figures, if possible, and to turn only as a last resort to young and obscure persons. One does not need wholly to condemn the idea of being known by the "right people" as a means of professional advancement; but it is important to recognize that, in a career group as large as ours, the vast majority of able young leaders are unlikely to be known by the "right people" and that therefore the possibility of their contributing to the progress of education is limited unless

some more or less systematic methods are used to bring them to public attention.

Admittedly, it is easier to describe the problem than to prescribe a solution. Perhaps, however, the first step in the solution is a widespread recognition of the existence of the problem. Steady and persistent pressure by all members of the profession to identify young leadership and to encourage its development by every device possible will be the essential element in any prescription. Leadership can be drawn out of the profession by the efforts of those already in positions of influence, but there is also a challenge to the large body of educational workers to see that especially competent young persons are thrust forward.

U.S. OFFICE REORGANIZES

WHILE it is true that, fundamentally, leadership must come from individual men and women, it is also true, in education as elsewhere, that the power of the individual is enhanced by association with an institution or agency whose recognized function is that of developing and implementing new and better ideas. In education this truism suggests, among other possibilities, our state departments of education and the United States Office of Education as leaders for the profession. These columns are not the place for extended and critical comments on the educational leadership which these governmental agencies typically provide. Suffice it to say that, in the main, this leadership has

not been so vigorous or creative as it can be and should be.

The reasons for this relative ineffectiveness are varied and, in most instances, readily apparent. Too easy is the explanation that political interference or legislative controls make energetic leadership in state and federal offices of education difficult, if not impossible. Such restrictions no doubt exist, but they alone cannot explain the situation. It is probable that the essential qualities of the men and women within these offices provide the principal explanation. Here we are confronted with a circular constriction on improvement which seems most discouraging. We say that we cannot expect much leadership from state and federal educational agencies because their staffs are in large part undistinguished. On the other hand, we say that, because of the undistinguished character of the agencies, it is difficult to attract to the public service professional leaders of high quality.

In recent years it has been fashionable among educators to be especially critical of the work and leadership of the United States Office of Education. In all fairness to that Office, we should recognize that its present contributions to American education are probably not of any less importance than those of the Office for many years past. The heightened criticism stems in large measure from a growing belief that the Office can be, and ought to be, of more evident assistance to the schools than it characteristically has been. Recognition of this need led Commissioner Studebaker to write:

The U.S. Office of Education should be strengthened and reorganized in order that it may be prepared to do its indispensable part in giving national leadership and assistance to the educational systems and institutions of the several states and their local communities in meeting the long-term educational demands of the postwar period. . . .

The time has come to put the house of the U.S. Office of Education in order, so to speak, to carry its full share of the responsibility for long-term improvements of American education.

In presenting his proposals for reorganizing and strengthening the Office, as set forth at length in Part II of the *Annual Report of the United States Office of Education for the Fiscal Year 1944*, Mr. Studebaker points out that the broad functions of the Office are:

1. The collection of information with respect to education in the states and in other countries so as to make possible intelligent comparisons and conclusions regarding the efficiency of educational programs.
2. The formulation and recommendation of minimum educational standards which ought to be made to prevail in the schools and colleges of all the states and the preparation of suggested proposals and plans for improving various educational practices, arrived at by co-operative planning among private and public educational organizations and lay groups, such recommendations and proposals to be influential only if their merit and appropriateness warrant voluntary acceptance by the states and institutions.
3. The provision of services of a national character that cannot well be undertaken by single states acting alone, e.g., the collection, interpretation, and dissemination of national statistics, the conduct of national and other important surveys, the convening of conferences of national significance.
4. Pointing out desirable educational ends and procedures, evaluating educational

trends and giving educational advice and discriminating praise.

5. The offering of consultative services to states, school systems, and higher educational institutions on problems of reorganization, finance, administration, and curriculum.

6. The co-ordination of government activities relating to education through schools and colleges.

The reorganization now in progress calls for eight major divisions within the Office. Four of these—elementary education, secondary education, vocational education, and higher education—will be under one assistant commissioner. Four others—school administration, auxiliary services, international educational relations, and central office services—will be under a second assistant commissioner. To those actively engaged in secondary-school work, the expansion of the Division of Secondary Education may be of greatest immediate interest. For one thing, Commissioner Studebaker is to be applauded for his efforts to give elementary and secondary education a status within the Office befitting their significance in the educational scene. It has seemed to many school men that, in spite of practical explanations of the situation, the Division of Vocational Education has dominated the interest and activities of the Office in the field of secondary education. By giving secondary education a co-ordinate position in the new organization and by enlarging its staff, it can reasonably be hoped that a more appropriate distribution of emphasis will be achieved. So far as internal

arrangements are concerned, Mr. Studebaker points out:

The proposed organization of the Division of Secondary Education is similar to that of the Division of Elementary Education in its three subgroupings of specialists into units for a study of Organization and Supervision, Teacher Training, and Instructional Problems, respectively. Since the organization and the educational problems of elementary and secondary schools are related in important respects, this parallel type of staff organization in the Office will enable the comparable specialists in these two divisions to work closely together on problems common to the two school levels, without neglecting the important differences in educational approach occasioned by the differing maturity of pupils in elementary and in secondary schools.

A better organization cannot alone guarantee a more effective contribution to American education by the Office of Education; but, if we may assume that the efforts of the Office will be applied to really significant educational problems, the reorganization certainly increases the likelihood that fine leadership will result.

We are still confronted with the difficulty noted at the outset: persuading men professionally strong to join the staff of a state or federal office. The deterrents ordinarily are inadequate salaries and the limited possibilities of the positions. Commissioner Studebaker fortunately seems to be able gradually to break through these barriers. The enlarged concept of the functions of the United States Office of Education reflected in, and impelled by, the reorganization of the Office seems now to make it possible to attract to Washington more per-

sons of mature professional stature. Of especial interest to secondary-school people are the appointments of Dr. Galen Jones, Dr. Howard R. Anderson, and Dr. Philip Johnson. Dr. Jones, whose work in the field of secondary education is well known and highly respected, is the new director of the Division of Secondary Education. Dr. Anderson left his position at Cornell University to become specialist for social sciences and geography. His experience in, and his contributions to, this field have been extensive and substantial. Dr. Johnson, the new specialist for natural sciences, is equally well fitted for his new responsibilities. These and other new appointments present a cheering prospect of more educational leadership from the national capital.

SWORDS INTO PLOWSHARES

IF WE are to learn anything of continuing value for education from our educational experiences in wartime, this is precisely the time when the learning should be taking place. During the war, teachers and administrators were much too occupied with the press of current events to be in a position to assess impartially the recent and specialized developments in methodology or content. Now the pressure is removed, and, seemingly, the primary urge is to abandon forthwith wartime additions to the curriculum. Unless schools immediately set about reviewing and appraising these wartime developments, these innovations will have been discarded and

forgotten or will have been accepted as standard parts of the curriculum and, in this sense also, forgotten.

George F. McCahey, a teacher of science in the Hope High School at Providence, Rhode Island, writing in the March issue of the *Clearing House*, presents a brief case study of two war courses which one high school is re-converting rather than discarding. His discussion brings out the point that the setting, the subject matter, and at least some of the motivation of many war courses provide excellent bases for doing a better job than ever in promoting aspects of pupil growth which we have long recognized as important, war or no war. If we proceed to abandon the courses which were developed to meet the special needs of the last half-dozen years, without carefully examining their possible contributions to our long-term ambitions for boys and girls, we shall be doing our students a great disservice.

It should be pointed out that each school must, in considerable measure, be responsible for determining the ways in which it can apply its wartime courses to on-going needs. The character of these courses and of the other parts of the instructional program, as well as the needs of the boys and girls, must be evaluated school by school. It would hardly be wise to expect or to encourage a standardized pattern of retention or reconversion.

In addition to the possibilities of adapting war courses to peacetime needs, there remains the oft-noted possibility of adapting for secondary

schools some of the educational methods developed by the armed services. This possibility has been much talked about, but systematic efforts, by experimentation or other reliable means, actually to evaluate army and navy educational procedures have been few. One attempt in this direction is described in the booklet entitled *Swords into Plowshares*, published by Eugene B. Elliott, state superintendent of public instruction at Lansing, Michigan. Last summer, under the direction of Professor Raleigh Schorling, a group of students, all administrators, at the University of Michigan made a field study of the schools of the armed forces. When the group returned to Ann Arbor, they put together the lessons and conclusions that they were able to draw for civilian education. These form the subject matter of the recently published booklet. Since the report of this group of school men ought to be read in its entirety, only the major conclusions and recommendations are presented here. The report presents a discussion of each of these suggestions.

Recommendation 1.—We need to make greater use of sense experiences when staging learning situations.

1.1. Michigan needs one or more development units charged with the responsibility of creative production, reliable testing, and proper utilization.

1.2. The faculty of a school should have a standing committee on audio-visual aids.

1.3. The resourceful teacher should be given guidance in writing the script for a slide film.

1.4. Our associations of administrators, in the state and in the larger cities, should

each have a standing committee on learning aids.

1.5. Our teacher-education institutions should provide at least one good course in the proper use of learning aids.

Recommendation 2.—In our schools we need to do all that we can to make our boys and girls physically fit.

2.1. Schools should set aside adequate time in the school day in order that the goals of physical fitness may be achieved.

2.2. The program in physical fitness must be unified, broadly conceived, and implemented by a staff that understands the total program.

2.3. Communities should put forth strenuous efforts to provide adequate facilities.

2.4. Schools must build the proper attitude toward physical fitness.

2.5. The program should be administered with great flexibility.

2.6. A school should keep cumulative records of health and progress toward physical fitness.

2.7. The facilities for physical fitness should be available to all citizens of the communities.

Recommendation 3.—All aspects of guidance should seek to avoid the drastic waste of human resources.

3.1. Schools need a more comprehensive accumulating record of each pupil.

3.2. We must make wider use of tests.

3.3. We must see to it that the permanent record of a pupil is used.

3.4. We must provide an opportunity for each pupil to receive personal counseling.

3.5. A school large enough to afford it should include on its staff at least one member who is professionally trained in guidance procedures.

3.6. In each of the larger cities we need to create a department of research.

3.7. The guidance program must follow up the drop-outs and the graduates.

3.8. We can do far more than we do in orientation.

Recommendation 4.—Schools should make

a special effort to make the school day more exciting.

4.1. We should provide new and better courses for a high fraction of the high school's population whose needs are not well met in the traditional courses.

4.2. We should expand technical education.

4.3. Our small high schools should expand the curriculum by correspondence courses.

4.4. The road to continuous improvement of the curriculum needs to be opened.

Recommendation 5.—We should reconsider our total program of teacher education.

5.1. We need to do a better job when selecting candidates for certification.

5.2. We need to make certain that all our beginning teachers have a few competencies that are used day by day.

5.3. Schools must recognize and maintain a bill of rights for teachers.

5.4. We need to use the internship concept in teacher education.

5.5. All competent classroom teachers should be identified and given professional recognition and merited rewards.

Recommendation 6.—The traits of the good citizen must be geared to the education of the emotions.

6.1. In teaching the traits of the good citizen we should along with other techniques use incidental teaching.

6.2. Incidental teaching of citizenship should be so managed as to guarantee the student's freedom to learn.

These recommendations have a familiar sound; for we heard them all long before the war began. The particular value of this specific reiteration is that here they are presented with substantiating data from a mammoth educational enterprise which did its best to insist that only demonstrably effective teaching procedures be used and that no effort be

spared to develop still more effective methods. Here is some measure of proof that many educational practices which school men have believed to be effective, but have not been wholly in a position to employ, are as good as they were supposed to be.

PHYSICAL EDUCATION FOR ALL

THE health and physical-education programs of our schools have been sharply criticized in recent years because of the number of young men who were rejected by the armed forces for physical reasons. The facts on the physical condition of our young people are not to be denied, but it is important that, in trying to improve this condition, we have the total situation well in mind. Some of the commonly overlooked factors bearing on the problem were underlined recently by two specialists in physical education.

Professor Leslie W. Irwin, of Boston University, writing in the *Clearing House*, says that physical-education programs in our schools could not, of themselves, have been responsible for the physical inadequacies of our young men since most pupils are not reached by such programs. He observes:

If there was a failure . . . on the part of the schools, it could not have been due, to any marked extent, to undesirable existing programs. Rather, it can be attributed more to a complete lack of health education and physical-education programs designed to reach *all* of the students in the schools. Interscholastic athletics are the most widespread phase of the physical-education program. They are conducted in

most secondary schools throughout the country. Interscholastic athletics, however, are not a satisfactory substitute for desirable programs in health and physical education. Furthermore, those participating in athletics comprise only a negligible percentage of the total number of students to be cared for.

Obviously we are confronted not so much with the comparatively simple problem of improving existing work in health and physical education as with the more stupendous problem of making certain that some form of regular physical-education activity reaches every school youth.

Professor C. H. McCloy, of the University of Iowa, writing in the January issue of the *Educational Record*, emphasizes the need for programs which help young people and adults to stay in condition; for the rate of deterioration even among athletes is very rapid. In this connection McCloy brings out an issue closely related to Irwin's: respectable health and physical-education programs are practically nonexistent in elementary schools, and many of the serious deficiencies noted among men of draft age were not repairable because they were the outcomes of maladjustments allowed to develop during elementary-school years. McCloy makes one statement which should receive the careful attention of both opponents and proponents of universal military training. He says, in commenting on the physical values of such training: "These gains would probably be confined to one year of life of but three-quarters of the boys, and that year comes too

late in life for the gains to be effective."

Neither author belittles the difficulties which lie in the way of better physical-education programs in the schools. They do a special service, however, in calling attention to the serious need for extending these programs to reach all children.

MISCELLANEOUS ITEMS

Information about UNESCO School men are generally aware of the establishment of UNESCO—

United Nations Educational, Scientific and Cultural Organization—but have rather indefinite ideas about its purposes and form. Many uncertainties regarding UNESCO are cleared up in an article by Bernice L. Prince appearing in the March issue of the *Bulletin of National Association of Secondary-School Principals*. Miss Prince gives a brief statement of the background of the organization and quotes the constitution in full. In the May number of the *Elementary School Journal*, Flaud C. Wooton, of the University of California, Los Angeles, California, traces the history of the development of UNESCO, describes the constitutional provisions for the form of the Organization, and discusses its salient features.

Youth in the atomic age The Youth Council on the Atomic Crisis organized by the pupils of the Oak Ridge (Tennessee) High School has properly aroused much in-

terest and approval. The young people of Oak Ridge hope that other schools will follow this pattern. The constitution of the council was printed in the February 19 issue of the *Oak Leaf*, the school paper. Reprints have been made available to interested schools. For those unfamiliar with the Y.C.A.C. and those somewhat depressed about the future, the statement of the purposes of the council may offer information and encouragement:

The purposes of the Youth Council and the purposes of its members shall be:

1. Through giving attention to discussions of this subject in classroom, in public meeting, and in the press to learn the facts which the citizen should know about atomic energy and its social implications.

2. To promote discussion of this subject among family groups, relatives, and associates.

3. To encourage the writing by individual members of the Oak Ridge Youth Council on the Atomic Crisis of personally indorsed letters addressed to responsible men urging them to prevent destructive use of atomic energy; further, to impress upon nonmembers the value of so doing, and to encourage them to write letters similarly addressed for the same purpose.

4. The purpose and the resolution of the Oak Ridge Youth Council on the Atomic Crisis is that atomic energy shall be dedicated to peace.

That American young people are actively concerned with the state of the modern world is further shown by the results of a recent poll taken by the Institute of Student Opinion sponsored by *Scholastic* magazines. More than seventy-five thousand students in nearly sixteen hundred high schools

were asked whether they considered the United Nations strong enough. More than half of them thought it not powerful enough and felt that a world government should be formed to replace it. Even among those who did not favor the world government, an appreciable number felt that such a government might well be the next step after the United Nations had become a success.

Women's prospects for college Attention has been focused on the difficulty faced by men students who wish to enter colleges and universities. In the main, the effects which the current situation are likely to have on the college prospects of women have been overlooked, but a survey conducted by Benjamin Fine and reported in the *New York Times* on April 14 indicates that women, too, must suffer, perhaps more severely than men students. Fine says:

Difficult as it may be for the returning veteran to enter the overcrowded colleges and universities of this country, the situation is far more serious for the potential women students. . . . Thousands of qualified women applicants are being turned away because of insufficient facilities. . . .

Judging from the reports of the colleges and universities reached in the survey, the situation for women students will remain critical for the next year or two.

A guide to materials on occupations Counselors, librarians, and others who help boys and girls develop their occupational plans realize the value of pamphlet material dealing with the characteristics of

Counselors, librarians, and others who help boys and girls develop their occupational plans realize the value of pamphlet material dealing with the characteristics of

single occupations. Material of this type issued by public and private sources has increased rapidly in amount in recent years so that the ordinary teacher or counselor cannot readily keep abreast of the output. To meet the need for a comprehensive compilation of available pamphlets on occupational subjects, Gertrude Forrester, director of guidance in the Ridgefield Park (New Jersey) public schools has prepared a most useful volume entitled *Occupations: A Selected List of Pamphlets*. The major portion of the book is devoted to two sections, one of which arranges pamphlets in series by publishers, while the other arranges them by occupations and provides a brief annotation on each pamphlet. There are also helpful sections on "Indexing and Filing Pamphlets on Occupations" and "How To Use the Annotated Bibliography." This publication may be obtained at \$2.25 a copy from H. W. Wilson Company, New York 52, New York.

Aids in the teaching of reading Teachers interested in developmental reading at the secondary-school level can get real assistance from *Toward Better Reading*, an instructional guide prepared by Helen M. Roberts, assisted by the Advisory Committee on Reading of the Denver public schools. Superintendent Charles E. Greene states in the Foreword to the bulletin:

The guide has three objectives: first, to state the fundamental principles of an

adequate reading program; second, to discuss the reading problems of the junior and senior high schools; and third, to present and illustrate some techniques and devices which may be used in guiding reading in all fields of study.

While the material was prepared for, and is directed toward, the situation in Denver schools, the suggestions which the booklet contains undoubtedly have wide applicability.

The Negro in postwar industry A particularly careful and comprehensive treatment of the occupational problems of Negroes is to be found in *The Post-war Industrial Outlook for Negroes*, published by the Howard University Press as Number 1 of Volume IV of the Howard University Studies in the Social Sciences. The monograph contains the papers and discussions of the eighth annual conference of the Division of Social Sciences. Kurt Braun, the editor, points out that in the past few years there undoubtedly has been improvement in the occupational status of Negroes, but he goes on to say:

These advances . . . have been made to a very large extent precisely in those occupations and industries in which employment opportunities are likely to decline in an especially high degree in the postwar period. Besides, under traditional seniority rules, Negro workers may be hit worst by cutbacks, since they were generally the last to be hired. The question, thus, arises whether the Negro will be able to retain his wartime position after the war, to say nothing of his desire for further advances.

The monograph deals with broad issues underlying the problem but, for

the most part, is devoted to a straightforward, practical discussion of facts and conditions as they are.

A program of veterans' education Practically every school system, whether large or small, is actively engaged in adapting its services to accommodate returning veterans and their educational interests. The spring issue of the *Baltimore Bulletin of Education* should, therefore, be of wide assistance to school administrators and veterans' counselors, for it is devoted entirely to a presentation of the activities in which the schools of Baltimore are engaged on behalf of veterans. Every program for the education of veterans must be built on local needs and resources, but the experience of one large city which has approached the problem in systematic fashion can at least suggest profitable lines of development for communities which are only now marshaling their own resources.

INSTITUTE FOR ADMINISTRATIVE OFFICERS OF HIGHER INSTITUTIONS

THE twenty-fourth annual Institute for Administrative Officers of Higher Institutions will be held at the University of Chicago on July 2 and 3, 1946, in the Girls' Club room of the University High School, Room 159, Belfield Hall, 5820 Kenwood Avenue. The general theme of the institute this year is "Problems of Faculty Personnel." The papers to be presented at each of the four sessions will be related to a selected phase of per-

sonnel administration, consideration being given to the peculiar problems of different types of higher institutions as well as to problems of urgency in the demobilization period. The presentation of the papers announced on each program is to be followed by discussion from the floor.

In accordance with previous practice, the proceedings of the institute will be published in book form. Interested persons who are unable to attend the sessions may procure the proceedings through the University of Chicago Press. No fee is charged for attendance at the institute.

The institute, since its establishment, has always been an integral part of the instructional program of the University during the summer quarters. Further information regarding the program of the institute may be obtained by addressing Professor John Dale Russell, Department of Education, University of Chicago.

NINTH ANNUAL CONFERENCE ON READING

THE ninth annual Conference on Reading at the University of Chicago will be held in Mandel Hall beginning Monday afternoon, July 8, and closing Friday, July 12, 1946. The central theme of the conference will be "Improving Reading in Content Fields." This problem has been selected because elementary and high schools all over the country, recognizing the urgent need for greater efficiency among pupils in their reading and study activities in the various cur-

riculum fields, are attempting in many ways to bring about improvement. Furthermore, numerous requests for help through the conference in studying such problems have been received during the past year.

The general sessions each day will consider basic issues involved in promoting growth in and through reading in the content fields. The application of the principles and techniques developed in the general sessions will be considered at length in sectional conferences organized for those interested in reading problems in the primary, middle, and upper grades and in high schools and junior colleges.

Attention is directed to the fact that special sections have been provided at the high-school and junior-college level for teachers of literature, mathematics, science, and the social studies. This plan has been adopted to provide opportunity for teachers of these subjects to secure as much help as possible in identifying and attacking the reading problems involved in their respective fields. Since space will not permit presenting the entire program here, major emphasis is given in the outline that follows to those parts of the program of special interest to high-school and junior-college teachers and administrators.

MONDAY AFTERNOON, JULY 8

"Theme of the Conference," *William S. Gray*, University of Chicago

"The Nature of the Reading Problems in Content Fields, as Illustrated in the Case of Geography," *Edith P. Parker*, University of Chicago

MONDAY EVENING, JULY 8

"Barriers to World Peace and Steps in Removing Them," *Quincy Wright*, Division of Social Sciences, University of Chicago

TUESDAY MORNING, JULY 9

"Nature and Extent of Reading in Content Fields in Promoting Pupil Development": *Ruth Mary Weeks*, Kansas City, Missouri (Literature); *Harold P. Fawcett*, Ohio State University (Mathematics); *Francis D. Curtis*, University of Michigan (Science); *Howard R. Anderson*, United States Office of Education (Social Studies)

TUESDAY AFTERNOON, JULY 9

"Types of Development in Reading Needed in Content Fields": *Lois Dilley*, Rockford, Illinois (Literature); *Paul L. Trump*, University of Wisconsin (Mathematics); *Francis D. Curtis*, University of Michigan (Science); *A. Sterl Artley*, University of Missouri (Social Studies)

WEDNESDAY MORNING, JULY 10

"Facts about Pupils and Their Development That Influence Efforts To Promote Growth in and through Reading": *Esther J. Swenson*, Research Associate in Education, University of Chicago (all subjects)

WEDNESDAY AFTERNOON, JULY 10

"Methods of Clarifying and Enriching the Meanings of Words": *Harold A. Anderson*, University of Chicago (Literature); *Lenore John*, Laboratory School, University of Chicago (Mathematics); *Guy L. Bond*, University of Minnesota (Science); *R. B. Edgerton*, Elgin Academy, Elgin, Illinois (Social Studies)

THURSDAY MORNING, JULY 11

"Methods of Increasing Competence in Understanding and Interpreting What Is Read": *Walter Blair*, University of Chicago (Literature); *Ellen Gonnolly*, South Shore High School, Chicago, Illinois (Mathemat-

ics); *James M. McCallister*, Herzl City Junior College, Chicago, Illinois (Science); *Hilda Taba*, Intergroup Education in Co-operating Schools, American Council on Education (Social Studies)

THURSDAY AFTERNOON, JULY 11

"Methods of Increasing Competence in Reading for Specific Purposes": *Isabel Kincheloe*, Bureau of Curriculum, Chicago Public Schools (Literature); *Benjamin S. Bloom*, University of Chicago (Mathematics); *Wilbur L. Beauchamp*, University of Chicago (Science); *Dorothy Merideth*, Laboratory School, University of Chicago (Social Studies)

FRIDAY MORNING, JULY 12

"Methods of Increasing Competence among Pupils in Wide Reading": *William R. Wood*, Evanston Township High School (Literature); *Maurice L. Hartung*, University of Chicago (Mathematics); *John C. Mayfield*, University of Chicago (Science); *Kenneth J. Rehage*, Laboratory School, University of Chicago (Social Studies)

FRIDAY AFTERNOON, JULY 12

"Techniques for Classroom Diagnosis and Correction of Reading Difficulties," *Ruth Strang*, Teachers College, Columbia University

FRIDAY EVENING, JULY 12

"The Improvement of the Content and Usability of Textbooks in Content Fields" (a program organized by "Educational Publishers"): "Recent Progress," *Earl E. Welch*, Silver Burdett Company; "The Outlook for the Future," *Lloyd W. King*, Executive Secretary of the American Textbook Publishers Institute

On Tuesday, Wednesday, and Thursday evenings, a series of parallel conferences will be conducted: (1) a

round table on basic reading problems for subject-matter teachers who feel the need of a short course in reading, directed by William S. Gray; (2) a detailed study of reading problems pertaining to the field of geography, directed by Edith P. Parker, Department of Geography, University of Chicago; (3) a series of discussions of emotional problems among poor readers, directed by Helen M. Robinson with the assistance of specialists in this field; (4) a round table for supervisory and administrative officers on ways of developing a co-ordinated reading program in a school system.

The University of Chicago extends to all who are interested a cordial invitation to attend the conference. Those who are registered for courses during the summer quarter may secure admission to the various sessions on presentation of their University "identification cards." A nominal registration fee is charged to all others: \$6.00 (including tax) for the entire conference period, \$1.80 per day, and \$0.90 per half-day. Opportunity for registration and the payment of fees will be provided from 10:00 A.M. to noon and from 1:00 to 2:00 P.M. on Monday, July 8, in the corridor of Mandel Hall, and during the half-hour preceding each subsequent half-day session. No preliminary approval by mail is necessary. Requests for additional information should be directed to Professor William S. Gray, Department of Education, University of Chicago.

WARREN C. SEYFERT

WHO'S WHO FOR JUNE

Authors of news notes and articles

The news notes in this issue have been prepared by WARREN C. SEYFERT, associate professor of education and director of the Laboratory School at the University of Chicago. FRANKLIN BOBBITT, professor emeritus of education at the University of Chicago, argues that the Harvard report, *General Education in a Free Society*, fails to take into account the unspecialized duties of living by laymen and that consequently the academic program recommended is irrelevant. HARRY E. BENZ, professor of education at Ohio University at Athens, Ohio, analyzes the collegiate scholastic achievement of a group of students who entered college in 1935 and 1936 without having credit in high-school mathematics. FREDERICK E. BOLTON, research professor in education at the University of Washington, discusses the reasons why high-school teachers should receive their training in universities rather than in teachers' colleges and what the universities can do to improve their teacher-training courses and thus attract greater numbers of prospective high-school teachers. ROBERT WHITE, JR., principal of the Burlington High School and Junior College at Burling-

ton, Iowa, continues his discussion of the feasibility of reorganizing school systems according to the 6-4-4 plan. His third article, the last of the series, treats the subject of guidance in relation to this type of reorganization. B. EVERARD BLANCHARD, principal of Dixie County High School at Cross City, Florida, discusses the problem of juvenile delinquency and makes suggestions for combating it through properly supervised, wholesome recreation. A list of selected references on educational statistics is supplied by FRANCES SWINEFORD, research associate in the Department of Education at the University of Chicago, and KARL J. HOLZINGER, professor of education at the same institution.

Reviewers of books

JOHN A. NIETZ, professor of education at the University of Pittsburgh. WILLIAM E. HENRY, research associate for the Committee on Human Development at the University of Chicago. NELSON B. HENRY, professor of education at the University of Chicago. STUART C. BROWN, graduate student in the Department of Education at the University of Chicago, and formerly teacher of mathematics in the high school at Ganado, Arizona.

HARVARD REAFFIRMS THE ACADEMIC TRADITION

FRANKLIN BOBBITT

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HARVARD UNIVERSITY recently issued a significant report, *General Education in a Free Society*,¹ which was prepared by a committee of twelve distinguished members of its faculty. The report is a timely piece of work, and it deals with the largest, as well as the most grievously mismanaged, portion of American education.

In the modern world with its division of labor, human responsibilities can be divided into two kinds: (1) the specialized duties of one's calling and (2) the unspecialized duties of general living by laymen, in the areas of citizenship, physical living and health care, family life, recreation, amateur arts, association, communication, religion, the seventy-year life of emotion, and the seventy-year life of the understanding.

A person engages in the activities of his vocation for 30 to 50 hours a week and in his activities as a layman about 120 to 140 hours. He is, then, part-time specialist and part-time layman, but he is a layman for three times as many hours as he is a worker in his calling.

It is taken for granted that a person

should be competent in his vocation. However, as the world now operates, it is increasingly evident that he needs also to be competent as a layman. For both roles he needs abundant education that is carefully adjusted to his needs.

Education for the specialized responsibilities is trade, vocational, technical, and professional education. Because of the nature of specialization, training has to be different for every vocation. The multitude of occupations call for thousands of specialized courses.

The duties of laymen in general outline, are, however, much the same for everybody. There are individual differences but no division of labor. Laymen, then, all need education for proficiency in the same general fields of human endeavor. Theirs is *general education*. A more significant term, having the same reference, but better for practical use, is "layman's education." It covers the ten large areas of human living enumerated above. A different method of classification might result in a different division, but it would cover essentially the same ground. The ten that we use here for our purposes correspond rather closely to those mentioned by the Harvard Committee.

¹ *General Education in a Free Society*. Report of the Harvard Committee. Cambridge, Massachusetts: Harvard University Press, 1945. Pp. xiv + 268.

During recent decades the specialized vocations have been making marvelous, sometimes seemingly miraculous, advances along a thousand lines. The foundation of this advance has been the unprecedented efficiency of specializing technical and professional education, of which the graduate level of the university is the magnificent capstone. High school and undergraduate college have conceived their chief function to be to lay solid foundations for this specializing education. As a result of their concentration of attention on the furtherance of specialization, the parallel phase of layman's education, except for literacy, has been mostly lost sight of and neglected by both schools and colleges.

Placing this strong emphasis on the training of specialists has not been a mistake. Quite the reverse, except for literacy, it is the finest thing that educational institutions have yet done. But it does not excuse them from the other equally necessary half of education. All men and women are laymen for at least three-quarters of their time and specialists for not more than one-quarter. As laymen, they operate in a number of complex and difficult areas of responsibility and opportunity, each of which calls for long and thorough shaping of their powers.

As laymen, as free and sovereign citizens, they are called on to arrive at evaluations, to make judgments and decisions, and to bear responsibilities relative to a thousand far-reaching human relationships and adjustments.

They should be able to do these things with a proficiency that will maintain our constructive social advance unbroken, and prevent the shameful state of wreckage that now lies over the whole world. It is a layman's responsibility of vast magnitude and complexity, and it rests heavily on every free and sovereign citizen, every man and woman.

As laymen, as biological organisms in need of health and physical well-being, persons are called on every day to deal intelligently with countless aspects of physical nature, with the biological world both within themselves and without, with numerous and complex materials and appliances, and with social arrangements as they affect the physical well-being of the population.

As laymen, as members of families in an age of disruptive forces, they are called on for a sincere and careful maintenance and guidance of the forces that make for wholesome and inspiring family life. They are responsible for a discerning co-operativeness, for maintenance of balance between the interests of the individual and those of the family, for the understanding that can guide adjustments, for the cohesive emotions, and for the habits involved in harmonious living.

As laymen, engaged for as many hours a week in leisure activities as in work, they are responsible to themselves, to their families, and to society in general for engaging in those recreations that are personally, socially, emotionally, and intellectually whole-

some and that, as much as anything else, create excellent personalities capable of building and maintaining a worthy social order.

As laymen, gifted with potential powers of mind, they are charged by conditions with responsibility for wisely developing and maturing their understanding. They are called upon to use that understanding, during childhood, youth, and a long adulthood, in a way which creates and maintains their current and living knowledge of an advancing world.

As laymen in the other areas of general living, such as amateur practical arts, getting on properly with one's fellow-men, intercommunication, an emotional life that drives vigorously through wholesome channels, and a stabilizing religious life, they have countless other opportunities and responsibilities.

One has but to enumerate these vital areas of the layman's living to see the wide range of general education. It is far wider than that of the narrowly limited and routinized labors of one's vocation. It requires a correspondingly long and wide program that is definitely focused on laymen's needs. Like professional education, its purpose is proficiency in doing. It is to bring all men and women to do properly and well the many concrete things in the ten areas that make up the layman's daily living. The task of the Harvard Committee was to tell the University, and the country in general, just how education for these ten areas of lay-

men's living is properly to be accomplished.

The task is not simple. It requires, first, that each of the ten areas be separately analyzed to discover the things that men and women need to do in a competent way: the numerous concrete activities of the good citizen; the many things to be properly done in physical living and health care; the intellectual activities that should constitute the layman's conduct of his understanding; the needful repertory of recreational activities; and, similarly, the activities of each of the other areas. In the ten areas of laymen's living, there are, then, ten different sets of activities to be discovered. They call for as many different series of specific competencies.

After the analyses have shown what persons should be able to do well in the several areas, the second task is to lay out the programs that will strengthen and shape human powers into the desired forms. Preparation for competent living in the ten areas calls for ten programs of carefully conditioned and guided apprenticeships in those areas.

The committee greatly simplified these procedures. It dispensed with the initial task of discovering and defining the specific proficiencies needed by laymen. This relieved them of a full half of their responsibility and effected a saving of a corresponding portion of difficult work. But it did far more than this. In dispensing with the specific ends to be attained, they

relieved themselves of the second portion of their responsibility. This enabled them to escape the necessity of another very difficult half of their labors.

Responsibility imposes strict limitations upon freedom. It forces one to use exactness in defining his purposes or ends and to employ means of proved efficacy, and no others, in achieving those ends. It demands the exact methods of applied science. However, the committee, in divesting themselves of two major portions of their responsibility, liberated themselves from all such limitations. This left them free to follow the behests of pure reason, the guidance of the academic traditions, and the pressures of practical expediences.

Instead of ten difficult programs for the ten difficult fields of laymen's education, the freedom that they gained enabled them to formulate a single easy program that they pronounce equally good and efficacious for everything and everybody. Their plan is remarkably simple, definite, and clear. The four essentials of their plan, in outline, are as follows: (1) The secondary school is to require and enforce upon all students three year-units of academic study in English language and literature, three in natural science and mathematics, and two in history and social studies. (2) The undergraduate college is to require two year-units in each of the same three academic areas. (3) The materials for the fourteen academic

units are to be chosen to provide a wide general understanding of the English language and its literature, the world of nature, and the world of man. (4) The courses are to be so managed as to create four general, all-purpose mental powers: (a) power to think effectively, (b) power to communicate thought, (c) power to make relevant judgments, and (d) power to discriminate among values.

The committee opens its report, as one would expect, by distinguishing between the specializing education needed for the vocations and the general education needed by laymen. And at various places through the report they refer to such specific areas of laymen's needs as citizenship, health, the emotional life, religion, amateur arts, association, communication, and intellectual living.

They saw the task. They defined it in human terms. They enumerated the areas in which men and women are to be made proficient. Then, for no explained reason, they turned away from the human situations and, in purely academic terms, formulated a program that is not adjusted in any particular to concrete human living in any of the areas. Like medieval physicians, who could prescribe a single universal remedy for all ailments, they simply prescribe a single universal verbal program for making persons proficient in anything and everything.

Without looking to the multitude of concrete duties of the good citizen,

or toward the necessary apprenticeship of youths in responsible social living, the committee simply prescribes a fourteen-unit dose of academic language about English, the world of nature, and the world of man.

Without looking to the numerous difficult daily duties involved in the layman's physical living and health care in our artificial age, and without even the remotest reference to the long apprenticeship needed in these matters, the committee again prescribes the same fourteen magic units of academic language about English, the natural world, and the social world.

Without looking to the enormously difficult problems and duties of intellectual living by all laymen in an age when the success or failure of the human experiment is dependent on the layman's daily headwork, the committee blandly, and seemingly without sense of the difficulty of the problem, unanimously prescribes only a simple dose of academic language about English, the world of nature, and the world of man.

The seven other areas are passed over in the same unconsidered way. Without examining into the specific educational needs of any one of them, the committee simply writes out a universal prescription of fourteen units of academic language, administered in the academic atmosphere, behind four very opaque academic walls.

In our age of applied science, a maxim of management is that means

are to be accurately adjusted to ends. The first step is to define the ends with precision. Then, and not until then, can means be selected that will achieve the ends. In education, if the ends are merely verbal, then the means should be verbal. But if the ends are forms of wholesome human living in ten areas, then the means will have to be the apprentice stages of those forms of living in the ten disparate areas. In the latter case, a single program of academic verbalities is quite irrelevant.

"The purpose of all education is to help students to live their own lives," writes the committee with all the wisdom and directness of Quintilian or Montaigne. In that one superb statement, they present the complete refutation of the entire academic program that they recommend. If that statement is true, then, on their own authority, their whole merely verbal program goes out the window.

For young people rightly to live their own lives during youth is to participate, according to their ages and natures, in the several areas of normal human living. They are to be apprentice members of their families, apprentice members of general society, apprentices in the ways of human association and intercommunication, apprentices in the ways of intellectual and emotional living, and in the other areas. Right living in each area requires that they see, feel, and understand their needs; that they value and desire the ways of living that are best for them; that they strive honestly

and earnestly, so far as can be expected of immaturity, to hold to those ways; and that the wholesome fruits of their striving be satisfying, thus awakening desire for continuance and further improvement.

This apprentice living in the several areas may well be called *functional education*, to distinguish it from the merely verbal, academic kind. It is performance of function as the way of learning to function. As worded by Aristotle: "The things which we are to do when we have learned them, we learn by doing them." No other method of learning rightly to live has ever been discovered. We learn what we do. What we do not do, we do not learn.

"The fruit of education is intelligence in action," writes the committee. This magnificent statement means simply that wisely managed human living is the outcome of the education that is to be sought and the proof that such education has been achieved.

The human living is, then, to be carried on by those who are being educated. The intelligence that guides the living is to be their own. It is to be the guidance portion of their own living. But rightness of thought and action is hard to find. While each youth must find it mostly for himself, or he will never find it, yet in our complex age even the most capable individuals require help, guidance, and supervision through all the years of their apprenticeship. It is this need that lays a heavy responsibility on schools and colleges for finding effective ways, both intramural and extra-

mural, of giving professional guidance to youth through the years of their apprenticeship. The responsibility of the committee, not yet discharged, was to tell us how this was to be done.

The deceptive program of merely verbal, academic education has failed in the test of practical trial. For several generations, and particularly the last two or three, the kind of program, in substance, aim, and method, which the committee has only refurbished a bit, has been operating in the secondary schools and colleges of the more advanced countries of the world. It has been reaching the leadership of those nations. The degree of success of that academic program is proclaimed by the state of the world. For years, this globe has been a place of cruelty and carnage surpassing any known example in the world of wild animals, of savage men, or of civilized populations at any previous period. Most of the world has been reduced to a state of wreckage, despair, and destitution, and the rest to disorder and bewildered floundering. Millions of lives have been blotted out. More millions are now starving and freezing. Still further millions of once happy and promising persons have been maimed in body and mind, and their lives permanently blighted.

Nothing in the history of humankind proves its incapacitating ignorance so conclusively as the crumbling of civilization during the past few years. When a recently built bridge falls, there is proof of failure in the working of the engineering mind.

When a civilization crumbles, there is similar proof of failure in the workings of the people's mind. The latter simply has not been shaped for competence in doing the things in which it needs to be competent. Since it was the nations that have had the most academic education that not only failed to prevent, but even led, the wreckage, the evidence against the academic type of mind-building appears complete and incontestable.

It is the education, not the potential qualities of the people, that is at fault. The world has not failed where education has been sound. Specialist's education has been lifting it to the stars, while the layman's lack of education has left it to drag in the mire. And yet, as it happens, the specialists and the laymen are the same persons. If they have the intelligence, courage, industry, and will to follow the beneficent behests of science that lead to the heights in the world of technology, they, the same persons, have the same potential powers for equal intelligence, courage, and obedience to science—physical and human—in the areas of the layman's responsibilities.

The academic program recommended in the Harvard report is built on foundations and in accordance with plans that have been patently and conclusively proved unsound. It would cure the world's present evils by the same ineffective verbal education that could not prevent them. The tiny amount of improvement suggested is inconsequential.

What our nation needs is a process

of education that is guided, not by medieval misconceptions, but by *educational science*. If the latter does not exist, we shall have to approach the matter as did the physical scientists in creating the atomic bomb, namely, by first bringing the science into existence. Those scientists did not say, "It cannot be done."

A significant feature of the Harvard report is its dual nature. The committee really makes two interwoven reports. On the one hand, the men are alert-minded members of twentieth-century society. They see its nature, situation, and needs directly, with their own eyes, and without interference from academic preconceptions. When thus viewing it directly, as a scientist views the object of his studies, they write one of their reports. On the other hand, they have breathed the academic atmosphere from childhood; they have found it congenial or they would not have remained in it; their acceptance of its basic preconceptions has become second nature; its traditions have become the inarticulate taken-for-granted major premises of their thought; and they are keenly conscious of any number of practical and social considerations. Out of this institutional state of mind, they have written their other report.

With some care and a little binding-up of the severed places, it would be possible to disentangle the two reports and to present them in two separate volumes. They would present two irreconcilable philosophies and suggest

two vastly different plans for general education. One of the books would be small, fragmentary, and disjointed, with everything passed over briefly and casually. There would be little attempt to make it either clear or plausible. Nothing would be much insisted upon. But so far as it would go, it would be the beginnings of a thoroughly sound theory of general education. The few brilliant statements of educational principle in the report, like the two quoted above, would all be found in this little volume.

The other book would be relatively large, its thought well balanced and well rounded and written with all the smoothness and plausibility of long-matured thinking. It would present the verbal, academic philosophy. It would be anything but modern. Its appeal would be to "heritage" and

"tradition." It is surprising how frequently those words occur in the report, and how infrequent is its appeal to accepted principles of educational science.

The closing suggestion to be made here is obvious. The committee ought to extricate its small book and enlarge it into a well-rounded and well-wrought document. They believe in its philosophy, or they would never have written it into their report. If they would now round it out and put it into clear, convincing terms, they could make of it the authoritative charter of the nation's much-needed educational advance. This appears to be both responsibility and opportunity. Because of the people's affection and respect for their oldest university, its influence would be great and salutary.

STUDENTS ENTERING COLLEGE WITHOUT CREDIT IN HIGH-SCHOOL MATHEMATICS

HARRY E. BENZ
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A TRADITIONAL REQUIREMENT

DURING the past forty years important modifications have been made in the requirements for the study of mathematics in the high schools. At the beginning of that period practically all students in the secondary schools were required to present two units in the subject in order to qualify for graduation. Typically, a year of algebra was taken in Grade IX and a year of plane demonstrative geometry in Grade X. In some schools the grade placement of these subjects was other than that indicated, and in many the requirement in this subject was greater than two units. However, the classes graduated from American high schools at the beginning of the twentieth century included only insignificant fractions of students who had not had at least some experience with elementary algebra and geometry.

The reasons for this requirement need not occupy our attention at this point, nor need we be concerned with the justification or the rationalization of this requirement. Suffice it to say that the high-school population of that day was made up, in large part,

of pupils who possessed the intellectual capacity, the pedagogical docility, or the stamina, or all three, to "pass" the courses. Whether they actually achieved the remote objectives is not known, although few defenders of the faith could be brought to doubt that they did. The record indicates that a large fraction of the pupils satisfied the demands of their teachers and were successful in achieving those results which were deemed significant.

Presently, as every student of secondary education knows, the character of the high-school population began to change. Slowly at first, and then with ever increasing speed, the pupils who seemed unable to pursue these courses successfully increased in number. Teachers not versed in the newer knowledge of differential psychology gave varying interpretations to the performance, or lack thereof, of their pupils, but all of them were perplexed. As time went on, more and more pupils failed to meet the standards set up for them and thus failed to receive credit for these courses. Mathematics became one of the significant keys to the whole complicated problem of elimination from school.

As is usual in the case of cumbersome social institutions, the school was slow in adjusting to the new pressure put upon it. Gradually, however, changes came about. In general, the mathematical requirement was modified. Pupils were permitted to detour around mathematical obstructions in the pathway of learning and to secure the coveted diploma which certified to their graduation from the high school, although in most cases they were required to pursue certain specific curriculums. It remained common practice to require completion of courses in algebra and geometry of those pupils who pursued the "college-preparatory" curriculum or any of several other curriculums which carried different names but all of which implied emphasis on the so-called "academic" subjects.

In many cases the requirement was retained, but realistic adjustments in the content of the courses were made to conform to the average ability of the pupil population. Indeed, it may be said with considerable confidence that today no public high school which requires completion of these two courses by all its graduates, offers the same courses and maintains the same standards as were common forty years ago.

A SUGGESTED SOLUTION

A solution which from one point of view might seem to be very logical was not used. The courses could have been reserved for students in the upper two grades of the high school. Let

us examine the possibility briefly as applied to geometry. It seems safe to say that demonstrative geometry was first taught to adults, and only to adults of superior mental attainments, not to a cross-section of the population of fourteen-year-olds. Little is known of the teaching of geometry during the Middle Ages, but it appeared in America as a college subject. Eventually geometry came to be required for entrance to college, and this requirement compelled the preparatory schools to offer it. Gradually it sifted down to Grade X, where it was a standard piece of educational furniture forty years ago. After the advent of the junior high school, efforts were made to teach a unit of geometry in Grade IX, but with far from unqualified success. There even appeared in print a proposal to offer an introduction to demonstration in Grade VIII, but no evidence was provided to show that the suggestion was feasible.

In the 1920's researchers in the psychology of learning began to accumulate evidence tending to show that the learning of mathematics was conditioned in part by mental maturity. Some of them even offered to state the approximate intelligence quotient necessary for the successful pursuit of these subjects. Certain experiments purported to demonstrate that one of the principal things wrong with arithmetic instruction in the elementary school was that the various topics were being taught too early in the child's educational career. Al-

though much heat was generated in the argument over the validity of these conclusions and their accuracy was denied by some workers in the field, the influence of this point of view on present-day practice is undeniable.

It seems clear, from the observation of many teachers, if not from precise and controlled experimentation, that the effective learning of mathematics, including demonstrative geometry, is dependent, at least to some extent, on the mental maturity of the learner. In view of this observation, it seems odd that practically no schools, in their efforts to solve the problem here under review, took the obvious step of moving algebra and geometry to Grades XI and XII, in the hope that the added year or two of mental maturity would enable a larger number of pupils to secure profit from the study of these subjects. A few made this modification of their programs, but the results are not known. No record is available of any systematic research directed to answering the question whether a cross-section of the twelfth-grade population could obtain a better mastery of plane geometry than could a cross-section of the tenth-grade population. At the present time a substantial number of high schools permit students enrolled in curriculums which do not require geometry to elect the subject in Grade XI or XII if they desire to do so.

The question naturally arises: What would be the results of an attempt to put elementary algebra and demon-

strative geometry back into the college? This paper presents a report on an experiment along this line.

AN EXPERIMENT IN ONE UNIVERSITY

In 1936 one state university revised its curriculum to provide that all entering students who failed to provide entrance credit from high school in algebra and geometry should be required to take these subjects at the college level. Very few of those presenting themselves for admission had failed to take algebra (usually in Grade IX), but between 10 and 20 per cent of them had not pursued the subject of plane geometry. Each subject was offered as a one-semester course, meeting daily for one hour. At first, credit of five semester hours was granted for the successful completion of the course, but more recently the number of credit hours has been reduced to four, although the class still meets five times a week. The amount of ground covered and the thoroughness of the coverage naturally varies with the type of class and with the instructor. During the semester in which this article is being written, the geometry class taught by the writer will cover approximately two-thirds of the ground covered by the typical high-school class in a year, and probably with a thoroughness approximately equal to that found in the average high-school situation where only college-preparatory students are pursuing the course.

By this time the reader has probably raised two questions which are

extremely important but which are not strictly within the province of this report to answer. It seems appropriate, however, to note these two questions.

The first question is: Why should every student who has not heretofore studied elementary algebra and geometry be required to study them when he arrives at college? This practice has had the effect of requiring those subjects for college graduation, and, in fact, no student who has entered the university in question since 1936 has been permitted to be graduated without having credit for these subjects either on his entrance transcript or on his list of college credits. The answer would require an elaborate analysis of the aims of education and the philosophy of the curriculum in effect. Suffice it to say that the general idea is that no one should be permitted to acquire the Bachelor's degree, together with all the rights, privileges, and immunities pertaining thereto, without having made some contact with each of the major fields of learning, one of which is mathematics. If the university faculties hold this view, and if the situation in the high schools is such that many students do not study mathematics, and if the law requires that all graduates of approved high schools be admitted to the university, then the higher institution has no alternative but to provide opportunity at the college level for the pursuit of the subjects under consideration.

The second question is: How can

the granting of college credit be justified for what is properly a high-school subject? The phraseology here somewhat begs the question. Be it remembered that these subjects were once college subjects but that that situation has changed. So far as the present writer has been able to ascertain, the university under discussion is the only one in the United States which grants such credit. It is not at all uncommon for colleges and universities to offer students the opportunity to study algebra and plane geometry, but without college credit. To return to the question, we may ask another: Just what is properly a high-school subject? The question is simply one of grade placement, and educational workers in elementary and high schools have long since learned not to regard grade placement as something immutable or sacred. Could it be that the present content of some college classes in English is substantially the same as that taught at the high-school level forty years ago, or even today in some high schools? College Freshmen are regularly offered courses in many fields which, for certain members of the class, represent their first contact with that particular discipline. Historians of the teaching of the classics will recall the earnest soul-searching which characterized the guardians of academic standards when elementary work in Latin was first offered at the college level. Latin, too, had always been a secondary-school subject, but, when numbers of students began to appear on the college campus without

having studied the language, the Latinists offered to start them in at the beginning and grant them college credit for the work, rather than hand them over to the modern-language departments, where there were no handicaps of tradition to overcome.

RESULTS OF THE EXPERIMENT

The present paper presents a report¹ on a number of students in several sections of elementary algebra and plane geometry, taken at the college level. Before the statistical material is presented, it might be well to consider briefly the general type of pupil involved in these classes. In the state from which the university in question draws most of its students, high-school programs are commonly divided into curriculums, the college-preparatory curriculum being one of those available. It is believed that, in the high schools of this state, guidance service may be somewhat superior to the average for the country as a whole. The result of this situation is that a large majority of the pupils who definitely plan on going to college study mathematics while in high school. In general, then, it may be said that the college classes here being described are made up of persons who did not, while in high school, plan to enter college and therefore pursued other curriculums. We know that the average mental ability of high-school students who pursue other curriculums is lower than that of those enrolled in the col-

lege-preparatory curriculum. Some, no doubt, had sufficient mental ability to justify an expectation of success in college but, for economic reasons, followed a vocational curriculum which would lead to immediate employment upon graduation from high school. Many, especially those from smaller high schools where the program is not so likely to be of the multiple-curriculum type, simply avoided geometry because they had disliked algebra or had done poorly in it. In general, these students are not good college "risks."

Table 1 presents certain facts about those entering the university in the fall of 1935 and 1936. The second row of figures shows the number who were placed on probation at some time or other during their academic career. Under the procedure used, a student who fails to make a certain average is placed on probation and is so notified. This procedure provides a warning to him. At the end of the next semester he is either dropped from school, continued on probation, or restored to good standing, depending on the quality of his work. It will be noted that roughly half of the entire group of persons who entered with mathematical deficiency were on probation during their academic careers. Approximately a fourth of them eventually were graduated from the university, and about three-fourths of them dropped out before graduation. (The five who seem to be unaccounted for in the class entering in 1936 were still in school in 1941, when the figures were collected.) The average point-hour-

¹ For assistance in the collection of the data, the writer is indebted to C. F. Wendelken and D.W. Haley.

ratio shown for these persons is a measure of the quality of work done in the program as a whole. The university maintains a marking system making use of the letters A, B, C, D, and F, with points assigned to the various grades. Under the point system in use at the time when these data were assembled, a student whose marks were

who enter with mathematical deficiency are below average in whatever the college-ability test measures, they make poor marks, and few of them remain until graduation.

Table 1 also presents the records of those who dropped out of school before graduation, not including those who withdrew voluntarily and later

TABLE 1
RECORDS OF STUDENTS WHO ENTERED COLLEGE IN 1935 AND 1936 WITH
DEFICIENCIES IN MATHEMATICS

	ENTIRE GROUP		STUDENTS DROPPING OUT BEFORE GRADUATION*		STUDENTS GRADUATED	
	1935 En-trants	1936 En-trants	1935 En-trants	1936 En-trants	1935 En-trants	1936 En-trants
Number of cases.....	71	105	55	70	14	26
Number on probation at some time in college career.....	38	58	37	47	1	5
Number on probation when dropping out.....			29	41		
Number dropping out.....	57	74				
Number dropped for poor marks.....	15	28	15	28		
Number graduated.....	14	26			14	26
Average number of semesters attended.....	3.5	5.5	2.2	2.8	7.9	8.0
Average point-hour-ratio.....	1.19	1.18	.84	.78	1.53	1.56
Average percentile rank on college-ability test..	40.6	40.8	40.1	36.0	45.6	51.9

*The figures do not include students who withdrew voluntarily and later returned or those who were dropped from school but were later readmitted.

all C's would have achieved a ratio of 1.00. The average ratio attained by all students in the university during the period here involved was somewhat higher than 1.00. The maximum point-hour-ratio attainable for a perfect A record would be 3.00. The last row of Table 1 shows the average percentile rank of these persons on the college-ability test administered to all entering Freshmen. In general, it may be said that as a group the students

returned and those who were dropped from school but were later readmitted. Nearly two-thirds of those who dropped out before graduation were on probation at some time, and more than half of them were on probation at the time of dropping out. The average length of stay in school is about two and one-half semesters. The scholastic achievement of these students is definitely below that of the entire group under consideration, and it is

substantially below that of the entire student body.

Table 1 presents a similar record of the students who remained until graduation. Relatively few of these persons met scholastic difficulty, and for the most part they completed school in the regular eight semesters. In the two groups, however, there were twelve persons who attended summer sessions,

TABLE 2

COLLEGE RECORDS OF 176 STUDENTS ENTERING WITH DEFICIENCIES IN MATHEMATICS CLASSIFIED ACCORDING TO NUMBER OF SEMESTERS COMPLETED IN COLLEGE

Number of Semesters Completed	Number of Cases	Number on Probation	Number Dropped for Poor Marks	Mean Point-Hour Ratio	Average Percentile Rank on College-Ability Test
10.....	2	1	1	1.17	45.0
9.....	8	7	3	1.04	37.8
8.....	39	7	2	1.29	51.1
7.....	8	5	4	.94	39.8
6.....	5	3	1	1.58	39.8
5.....	6	4	2	1.12	39.8
4.....	18	12	6	.88	49.1
3.....	9	9	4	.46	39.5
2.....	43	30	19	.55	33.1
1.....	26	18	1	0.63	36.4
0.....	12				33.4

five of whom attended more than one such session. Comparison of the data for the students who dropped out and the figures for those who graduated reveals sharp differences in native ability (which is presumably what the college-ability test measures, at least approximately) and the subsequent performance as measured by the point-hour-ratio. It will be noted that those who remained until graduation achieved an average substantially equivalent to that of the entire student body.

Study of the records of these persons who were graduated indicates that, among those who enter with what is here termed "mathematical deficiency," there are some who are good college material. An entrance requirement which kept them out of college would take away a college education from some students whose subsequent performance demonstrates an ability to profit by such an education.

Not all the persons who enter with a mathematical deficiency belong in the same category when classified according to mental ability, or probable college success. Some are better college risks than others. As shown above, only a minority remain in school until graduation. However, it is important not to fall into the error of assuming that any student who fails to remain in college until he is graduated should not have been permitted to enter in the first place. If the content of college courses has any value, then a student who remains for one, two, or three semesters, and receives passing marks in some of his courses, and then is finally dropped for poor scholarship, or voluntarily withdraws from lack of interest or from discouragement or from a sense of futility, has received while he was enrolled some part of what we designate as an education.

Table 2 presents data for 176 students entering in 1935 and 1936 with mathematical deficiencies, classified according to the length of time that they remained in school. This table illustrates the progressive selectivity of the college curriculum. Approximately half of the students fail to re-

turn for their third semester of work, but only a fourth of these are eliminated through the compulsion of the institution. The quality of scholastic work done and the mental ability tend to increase as the number of semesters spent in school increases. That relation is to be expected, but emphasis should be placed on the fact that the higher a student's mental ability, the longer he is likely to remain in school.

It is interesting to note that some of these students, for reasons which are not known, elected to pursue additional courses in mathematics, of the type usually called "college mathematics." Twenty-three took college algebra or trigonometry or both; eleven took analytic geometry; four, differential calculus; one, integral calculus; one, theory of equations; and one, differential equations. Not all of these pursued the courses successfully, but the large majority received at least passing marks.

SUMMARY

Many high-school pupils today do not take work in mathematics above

Grade VIII, and among these are some who later enter college. Many colleges and universities, especially those in the Middle West and the Far West, do not require evidence of the successful pursuit of algebra and plane geometry for entrance. One university is experimenting with the problem of offering these courses at the college level, for college credit, and requiring them for graduation. Approximately two-thirds of the students thus affected drop out before achieving graduation, this group remaining in school, on the average, less than three semesters. About a third of those who fail to remain for graduation are dropped by the university because of low scholarship. If a student remains in school as long as four semesters, his chances of remaining until graduation are better than even.

Those who are graduated have a scholastic average approximately equal to that of the entire student body. In general, those who drop out before graduation have a scholastic average insufficient for meeting graduation requirements.

A LOST OPPORTUNITY IN TRAINING HIGH-SCHOOL TEACHERS

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AMERICAN universities have missed a great opportunity. Three decades ago the stage was all set for a remarkable achievement in American education. That opportunity was to provide professionally trained teachers for all the high schools of the country. The belief in training teachers for the elementary schools was thoroughly established by the third quarter of the nineteenth century. From 1839, when Horace Mann succeeded in having the first normal school established in Lexington, Massachusetts, the movement to provide training for elementary-school teachers spread with astonishing rapidity.

Little attention was paid, however, to special training for high-school teachers. Those persons prepared for teaching either by cramming for examinations through individual study or by attending an old-line classical college or a state university and taking only academic subjects. In most cases no pedagogical courses were offered. A few candidates went to the normal schools in order to acquire state certificates, which at that time were valid for any public-school position and generally for life after a year of experience.

INITIAL DEMANDS FOR TRAINED HIGH-SCHOOL TEACHERS

Clark University, established in 1887, was the first to follow Johns Hopkins University in making graduate research its chief objective. Dr. G. Stanley Hall was the first president. Psychology, especially as applied to education, became the outstanding subject. Hall's chief interest lay in adolescence. His research, writing, and popular lectures developed a marvelous interest in the better education of adolescents. About 1890 the National Education Association began to agitate for better-prepared high-school teachers, and the influence of G. Stanley Hall through his crusade for an understanding of adolescence began to stimulate school administrators. Child-study societies sprang up all over the country. About then the writer heard Superintendent Cooley of the Chicago schools say at a meeting of the National Education Association that the worst teaching in the whole school system was to be found in Grade IX—the first year of the high school. There, he said, the colleges send their graduates to begin teaching without any professional training.

The child-study movement and the charges made by such superintendents as Cooley were a challenge and a stimulus to the colleges and universities to do something to remedy the deplorable situation. A number of universities were stimulated to action by the demands made by progressive superintendents like Cooley and others. Nicholas Murray Butler became president, in 1886, of the old New York College for Training of Teachers, which later became Teachers College of Columbia University. Dr. Butler inaugurated a new type of teacher training. Harvard University appointed Paul H. Hanus as assistant professor of the history and art of teaching in 1891, and full professor in 1901.

New departments of education were established in several universities, and in some others older departments were reorganized and new staff members added. The older, very general courses in "pedagogy" were replaced by courses in principles of education, educational psychology, child study, adolescence, special methods in teaching subjects, school administration, school supervision, the high school, history of education, etc.

The University of Iowa and the University of Michigan led the procession of state universities establishing departments of pedagogy for training high-school teachers: Iowa in 1873, Michigan at about the same time. The courses offered were very general, elementary, and meager in number. By 1900 practically every state university had provided for a

department of pedagogy or education, the chief purpose of which was to train prospective high-school teachers professionally.

In 1893 the famous *Report of the Committee of Ten on Secondary School Studies* was published by the National Education Association. That report awakened teachers and college administrators to the great necessity of a scientific revaluation of school subjects in the education of adolescents. The National Education Association followed that report by the publication in 1907 of the *Report of the Committee of Seventeen on the Professional Preparation of High-School Teachers*. This writer was privileged to be one of the seventeen committee members. That report was the result of two years of intensive investigation. Based on philosophical and scientific data and practical considerations, the later report formulated specific standards of academic and professional training for all teachers in secondary schools. Through that document the secondary schools were influenced to demand, and the universities to provide, sound academic scholarship and professional training of prospective high-school teachers.

RISE OF SCHOOLS OF EDUCATION

Soon schools of education were organized in many universities. These were intended to bring together under a unified management all the courses in the university that contributed directly to the professional training of

high-school teachers. The nucleus was the department of education.

Paralleling the rapid growth of the schools of education there was an unprecedented expansion of the universities in all directions, especially in physics, chemistry, biological science, engineering, political science, and business administration. The housing and laboratory equipment of the science and the engineering schools were very expensive. Universities having medical and law schools had to drain their resources in order to maintain Class A schools accredited by the American Medical Association and the American Bar Association. To regents, most university executives, and faculties, these expanding needs seemed to overshadow entirely the needs for commensurate equipment of the schools of education. As a consequence the schools of education did not receive sufficient funds to enable them to do their work as they desired. They were cramped for space, deficient in specialized library equipment, lacking in laboratories and in adequate practice schools, short of clerical assistance. The small staffs were overburdened with classroom schedules and lacked trained specialists in the methods of teaching the high-school subjects.

NORMAL-SCHOOL EXPANSION AND RISE OF TEACHERS' COLLEGES

One of the results of this parsimony in the provisions for the proper training of high-school teachers in university

schools of education was the expansion of the normal schools to train high-school teachers as well as elementary-school teachers. They have nearly pre-empted the junior high school field and are sending many graduates into the senior high schools. In some states all elementary-school principals must get most of their training in the normal schools (teachers' colleges).

In the early days of the establishment of university schools of education, the trend seemed to predict that soon all elementary-school teachers would be graduates of normal schools with two-year courses and that all high-school teachers would be college graduates with at least a little professional training. Another movement began to be discernible on the horizon. The normal-school administrators noticed that the universities were establishing "schools of education" instead of just "departments of pedagogy." Sensing the new development, the normal schools immediately became apprehensive that their expansion might be restricted. To stem the new tide, they began to clamor for a change of name to "teachers' colleges" and made a bid for training high-school teachers, principals, and superintendents as well as elementary-school teachers. The majority of university presidents and deans of schools of education did not seem to realize what was happening. Because of the rapid growth in numbers of students in the university schools of education, they seemed to assume that the universities and colleges had a monopoly

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on the training of high-school teachers and of principals and superintendents.

The writer recognized then that the normal schools were maneuvering for a position which would put them in control of the main work in the preparation of all teachers. They maintained that in most states they were established by law "to train teachers for the public schools," and they interpreted that provision to mean all types of teachers, including high-school teachers, principals, and superintendents. My own belief was that the normal schools should give adequate training to all elementary-school and rural teachers and that the universities should have a clear field in training high-school teachers, principals, and superintendents.¹

A few states became alarmed at the duplication of functions in the universities and the normal schools and made some effort to eliminate the duplications. As an illustration, the Legislature of the State of Washington in 1915 instituted a survey of all the public higher educational institutions of the state. The United States Bureau of Education made the survey and recommended clear-cut boundaries in the functions of the normal schools, the State College of Agriculture and Mechanic Arts, and the University of Washington in the field of teacher training. The Bureau recommended that the normal schools be restricted to the training of elementary-school

teachers, and the University of Washington and the State College to the preparation of high-school teachers, principals, and superintendents.

Normal schools were able to secure funds for greatly improving the facilities for training elementary-school teachers. As the normal schools succeeded in securing better equipment, the university schools of education were generally starved, and as a consequence the reorganized normal schools (teachers' colleges) have said, "The universities are not doing properly the job of training high-school teachers. We must do it." All over the United States the normal schools have become teachers' colleges. In some cases they have forsaken the word "teachers'" and are now "state" colleges, seemingly asserting that they must parallel the universities. With few exceptions they grant the Bachelor's degree; some grant the Master's and a few the Doctor's degree.

The state teachers' colleges could justly maintain that the university schools of education were not equipped to furnish the best professional training. The university schools lacked adequate practice and demonstration schools and well-trained teachers of methods in academic subjects. The professional curriculum in the university schools of education is usually much more meager than it is in the teachers' colleges. The classroom teachers graduated from the universities almost invariably have a poorer professional spirit toward their work than have the teachers-college graduates.

¹ Frederick E. Bolton, "The New Normal School Movement," *Educational Review*, XLVI (June, 1913), 59-65.

As a consequence superintendents give preference, especially for junior high school positions, to candidates who have had teachers'-college training.

All these factors gave the normal schools a leverage in asking legislatures for increased appropriations for the extension of the curriculum to four years leading to the Bachelor's degree. Universities have generally accepted normal-school credits at full value when students transfer. The graduate schools also have generally admitted graduates of the teachers' colleges, although these candidates are sometimes required to do a little extra work in their major academic subject.

In most states, graduates of four-year courses in teachers' colleges are eligible to teach in the junior high schools; that is, they are eligible to teach in the first nine grades of the public schools. More than 80 per cent of all public-school pupils are in those grades. University graduates in most states are limited to the last four years of the high schools. Sometimes they may teach in Grades VII and VIII where there is a specific junior high school organization, but the teachers'-college graduates are usually preferred for junior high school work.

Another factor that operates in favor of preparing in the teachers' colleges and against preparing in the universities is the higher cost in the universities. Generally the teachers' colleges are tuition-free, and the universities are not. Most expenses are generally lower in the teachers' colleges than in the universities.

With all these conditions, it is not to be wondered at that the enrolments in the teachers' colleges are much larger than those in the university schools of education. The enrolments in the former institutions have increased rapidly since they began awarding the Bachelor's degree. The enrolments in university schools of education have declined rapidly in rate of increase since the new developments have taken place in the teachers' colleges.

The teachers' colleges have done a splendid work in training elementary-school teachers, and it is to be regretted that they have not been content to remain in that field. That they require a four-year course and award the Bachelor's degree is commendable, but that they assume the function of training high-school teachers is a great mistake. High-school teachers ought to have five years of training (as they now receive in several states, notably California, Oregon, and Washington). They ought to study in institutions having faculty members possessed of ripe scholarship and highly trained in research. The teachers' colleges do not have such faculties. Of course there are occasional individuals who are scholars, but as a whole these faculties do not rank in scholarship with university faculties. It is seldom that the members of the teachers'-college faculties write books or articles for scholarly magazines. The individuals who do produce scholarly publications soon find their way into university faculties. The teachers' col-

leges offer little opportunity or stimulation to do research and writing.

REORGANIZATION OF SCHOOLS OF EDUCATION NEEDED

The usual school of education faculty is so constituted that professional education cannot be effectively organized. The school of education faculty is not the same as the staff of the department of education. The faculty of the school of education usually includes at least one member of every academic department in the college of arts and sciences. These latter generally outnumber the membership of the department of education. Also, the curriculum and all regulations are customarily passed on by the whole university faculty.

In other professional schools, such as law, medicine, dentistry, the faculties include only those in the particular fields. While the curriculums of those schools may be voted on by the entire university faculty, the recommendations of the professional group are approved as a matter of course. A professor of Latin or French would not presume to pass judgment on what should be taught in surgery, toxicology, or administrative law, or on the number of units required or their positions in the respective curriculums. The professional faculties rightfully decide those questions.

The schools of education, however, have never had any such autonomy. Whenever a department of education proposes to increase the requirements in education courses in order to make

the professional training more effective, the plan is sure to meet with opposition from members of the arts and sciences faculties. As a consequence the amount of work required in education is but little greater than it was two decades ago—even in states which now require five years of college preparation for state certification. All the education courses are so brief that it is absolutely impossible for students to think the materials through in such a way that they can make the principles functional when they begin teaching.

Suppose, for example, we state to students in our abbreviated courses that sometimes the inductive method should be followed in teaching and sometimes the deductive method; or that remedial work in reading or arithmetic is needed; or that pupils should be classified on the basis of their intelligence quotients; or that the "whole" method in memorizing is sometimes more efficient than the "part" method; or that the school should contribute to democratic living, etc., etc. With the usual necessarily condensed consideration, have we a right to assume that the students really understand or could apply the principles even though they parrot the statements back to us on examination day? If we do, we are much mistaken. Each statement needs much verbal explanation and elaboration, and then the students should have abundant opportunity for clinical observation of the principles at work in an actual schoolroom. They should also formu-

late specific concrete examples illustrating the generalizations. All that takes much time, but it is the only way to insure comprehension and ability in application of principles.

STATE REORGANIZATION OF EDUCATION TO ELIMINATE DUPLICATIONS

One of the major causes leading to the subordination of university schools of education is the unfortunate organization of higher education in most states. Instead of a single board having control of all the higher institutions, the state laws generally provide for a board of regents or trustees for the state university, another board for the state agricultural college, and still another for the normal schools or teachers' colleges. Some states even have a separate board for each normal school. Such an organization can be guaranteed to cause duplications of activities and expenditures, jealousies, friction, political logrolling, and reduced efficiency for every institution.

In most states the many teachers' colleges, with their vast numbers of graduates, loom up so impressively on the political horizon that the university school of education, with its relatively small numbers of graduates, is likely to be put in the shade when support funds are under consideration. The university schools of education can never recover all the lost ground. The teachers' colleges have achieved such a strong position that in many states they will always be regarded as *the* professional institutions for training teachers. They will be more amply supported than are the university

schools of education, which will be regarded largely as research divisions for giving the main graduate work for teachers of education in the teachers' colleges, schools of education, and for high-school principals, supervisors, and superintendents. Some of the teachers' colleges also are already offering this graduate research work, and others are laying plans to do so.

PRESENT NEEDS IN UNIVERSITY SCHOOLS OF EDUCATION

There is still time for the universities to recover partially this opportunity already too long lost. But it cannot be done by any halfhearted or merely camouflaging measures. The only way in which the lost ground can be recovered is to establish and maintain the training of high-school teachers in such a superior way that school superintendents, boards of education, and the public will demand only university-trained personnel. To train teachers for such a demand will require the maintenance of greatly improved schools of education.

At present there are not more than two or three university schools of education adequately equipped to perform this service. Not a single school is comparable to the Class A medical schools accredited by the American Medical Association or to the numerous great engineering schools throughout the country. Only one or two have special libraries comparable with those in fifty or more great law schools. The education library should be suitably housed, adequately equipped with basic and research

materials, and properly staffed to serve students and faculty.

A school of education needs housing space for more than the barest classrooms, where teaching is attempted mainly by the lecture method so generally followed in elementary classes in general arts and science colleges. There is justification for inspirational lectures to large classes by master-teachers, but, unless these are supplemented by individual conferences and by library and laboratory work supervised by mature teachers—not student quiz assistants—real training is not secured.

In this day of statistics and graphic representation, every school of education should be equipped with workrooms having suitable desks, tables, drawing materials, and calculating and tabulating machines. Every instructor's office should be more than a place to hang one's hat, should be equipped with more than one extra chair for a chance visitor. It should be a real workroom, where all the time-saving and efficiency-promoting paraphernalia obtainable are constantly at hand. Clerical assistance is absolutely essential for the productive teacher and research worker. To expect productive research and publication when the professor has to write everything in longhand and must file his own correspondence and reference cards is comparable to asking a scientifically trained agriculturist to plow his fields with an old-fashioned plow drawn by a yoke of oxen.

Central in a school of education should be the clinical laboratories.

These should consist of a complete small school system fully representative of the schools in which the graduates will have their initial teaching experience. Some of the teachers' colleges have such facilities. The school should be entirely staffed, organized, and managed by the school of education. The school of education should pay the differential between the regular cost in the district and the added cost for a highly trained superior staff and necessary additional equipment. Bus transportation for the cadet teachers should be provided by the school of education. To be sure, all this would be expensive—and worth it! What medical school would do without laboratories, research rooms, equipment, hospitals, clinics?

A campus demonstration and experimental school entirely organized, equipped, and controlled by the school of education is also a necessary adjunct to the school. A university located in a metropolitan city is fortunate if opportunities for observation and practice are permitted in the city school system, but it should not be the sole or main facility. In a city system the work must be taken when and where it is convenient for the city. There is no opportunity to arrange or to experiment. There is usually little possibility for discussion with the regular teachers. In schools controlled by the school of education, every teacher should be employed, in part, because of skill in counseling cadet teachers and because of superior ability in teaching the regular classes. Their teaching schedules should be

lightened to afford ample time for giving professional assistance.

Some advocate the plan of having all teachers take the first four years of training in a teachers' college and the high-school teachers take a fifth year in a university. This plan is faulty. It is much like constructing a two-story house according to architectural designs and then later adding another story on top; the result is a botched job. Many who have taken their training that way would agree with this evaluation. Deans who have had to arrange programs for this fifth year for transfer students will agree that the plan is an educational maladjustment.

Some state universities have retaliated against the teachers' colleges by including the training of elementary-school teachers. That is a mistake. Universities should not undertake this training. A teacher-training institution is geared for training either elementary-school teachers or high-school teachers, but not both. Neither institution could give efficient training of both types without greatly expanding and diversifying its curriculums, buildings, and equipment.

Schools of education have done a splendid job in training graduate students for various types of professional service. They rank near the top in many university graduate schools in the number of persons who earn Masters' and Doctors' degrees. These men and women are found among the leaders in superintendencies, high-school principalships, and research directorships, in city school staffs, and in state departments of education.

The members of the departments of education in the teachers' colleges, as well as those in the university schools of education, have been largely trained in the university schools of education.

The leadership developed through the schools of education at the graduate level has been the chief factor in achieving the remarkable results in educational progress during the past four decades. The contribution of the normal schools and teachers' colleges in providing trained technicians for the elementary-school grades has been equally notable, but no such contribution has been made for the rank and file of teachers in the high schools. Beginning high-school teachers need better knowledge of suitable curriculum materials; better understanding of adolescent development; better ideas of community relations and of democratic society; greatly improved techniques of instruction; and, of equal importance, a genuine professional spirit of service.

Thinking people are now looking to education to save the world from catastrophe. It is during the period of adolescence that ideals of life are visioned and crystallized. Youth need the wisest of teachers for leaders. Can we afford not to provide them? That should be one of the chief missions and obligations of the university schools of education. No other university division has accomplished so much on such meager support. The time has come when generous material assistance and complete freedom in meeting their tremendous responsibilities should be granted.

FEASIBILITY OF 6-4-4 REORGANIZATION IN SCHOOL SYSTEMS WITH JUNIOR COLLEGES

III. THE GUIDANCE PROGRAM AS A FACTOR IN REORGANIZATION

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INTRODUCTION

THIS is the third and last in a series of articles drawn from a study made in 1944 to determine the feasibility of 6-4-4 reorganization among ten Iowa school systems maintaining junior colleges. Readers of the previous articles¹ will recall that these ten systems were classified into three groups on the basis of the degree of association evidenced between the junior college and the local public high school. These groups—the high association, the moderate-association, and the independent groups—included four, four, and two systems, respectively. The major questions of the present degree of integration and the feasibility of further integration leading to a culminating 6-4-4 organization were analyzed with reference to six major areas of organization: housing, administration, faculty, curriculum, guidance, and extra-curriculum. The present article is a summary of the evidence and implications found in the area of guidance programs.

¹ Robert White, Jr., "Feasibility of 6-4-4 Reorganization in School Systems with Junior Colleges: I and II," *School Review*, LIV (March and April, 1946), 140-47, 222-30.

The data secured on guidance personnel included title, grade level of work in guidance, location of offices, and amount of time freed for guidance. Evidence was also secured on the transfer and use of high-school records by junior-college guidance personnel, the level at which students planned junior-college programs of studies, and the extent and character of junior-college promotion with high-school students. Data concerning the students' degree of success in the programs of study and concerning their marks were drawn from the transcripts of junior-college graduates of 1942.

CURRENT ORGANIZATION OF GUIDANCE PROGRAMS

Personnel.—All the junior colleges had at least one official giving guidance at the junior-college level only. The average amount of time freed for this work by this official, generally known as the "dean," was 38.3 per cent, ranging from 60 per cent in two schools to 20 per cent in two schools. The average amount of time freed, by groups of colleges, was 30.8 per cent in the high-association group, 42.5 per cent in the moderate-association

group, and 55.0 per cent in the independent group. Two junior colleges reported the use of a guidance director responsible for the organization of a guidance program covering both the high school and the junior college. Each indicated that 10 per cent of his time was spent on guidance at the junior-college level. In one of the schools the responsibility for advisement of the junior-college students was divided among five advisers, with a time allocation of 10 per cent each.

It was discovered to be typical practice in the high-association schools for the high-school principal to register incoming students. This process includes a certain amount of advisement and has advantages stemming from the principal's previous knowledge of the registrant.

All the high-association junior colleges reported that one administrator was responsible for the guidance program at both levels. In all but one of the other schools the separate junior-college administrator was responsible for the program.

Transfer of records.—Inquiry was made regarding the extent to which use of the high-school records, including records of scholarship, educational and vocational planning, personality, attendance, discipline, health, and anecdotal material, was made available to the junior-college guidance functionary. Great extremes in practice were noted. In one situation, where separate high-school and junior-college offices were located in the same building, the high-school office

made up formal transcripts of credits for its graduates entering the junior college and sent these, with no other accompanying records, to the junior-college office on the second floor. In other words, this particular junior college had no more records for the graduates of its associated high school than it had for graduates of a high school miles away. In another instance, even the transcript of credits was not supplied, and the junior-college officers accepted the student's oral statement as to his record. At the opposite extreme, the guidance officer worked with a junior-college student in the same office that he had used when he had worked with this student at the high-school level and thus had access to all former records in an active file.

The most typical practice, noted in six junior colleges, was the transfer of scholarship records only. Three colleges reported a transfer of complete records, and in one there was no transfer of any records. Of the four high-association schools, three reported a transfer of complete records and one transferred scholarship records only. In the four moderate-association colleges, only scholarship records were transferred. The two independent junior colleges were divided, with one receiving no high-school records and the other using scholarship records only.

Grade level of planning junior-college courses.—The grade level at which the junior-college course of study is planned is significant. To defer plan-

ning until the student reaches Grade XIII deprives the student of the operational effect of the guidance program. Five of the junior colleges indicated that the student planned his program at the beginning of Grade XIII, and the other five reported that such planning occurred during the time the student was in Grade XII. Three of the high-association schools were included in those in which planning was done

junior college could be promoted with high-school students were defined: (1) Home-room advisers plan junior-college program. (2) Home-room advisers promote junior-college attendance. (3) Assemblies discuss and promote junior-college attendance. (4) High-school personnel organization makes contacts with parents on behalf of junior-college attendance. (5) High-school personnel organization, exclud-

TABLE 8
FREQUENCY OF USE BY HIGH SCHOOLS OF VARIOUS PROMOTIONAL METHODS
ON BEHALF OF JUNIOR-COLLEGE ATTENDANCE

PROMOTIONAL METHOD	FREQUENCY REPORTED IN JUNIOR-COLLEGE GROUP			
	High-Association	Moderate-Association	Independent	Total
Home-room advisers plan junior-college program.....	1	.....	.....	1
Home-room advisers promote junior-college attendance.....	3	2	.....	5
Assemblies held on behalf of junior-college attendance.....	4	4	1	9
High school makes contacts with parents.....	3	2	.....	5
High school interviews students.....	3	2	1	6
Total.....	14	10	2	26
Average number of methods used	3.5	2.5	1.0	2.6

during Grade XII, along with two from the moderate-association group.

Promotion of the junior college with high-school students.—Since the giving of information is part of a guidance program, promotion of the junior college with high-school students is a legitimate part of the guidance program. The more vigorously the high-school organization promotes the junior college, the greater is the presumption of integration.

Five possible methods by which the

ing home-room advisers, interviews students on behalf of junior-college attendance. Data on the various methods employed are presented in Table 8. It will be seen that the most commonly used method was the presentation of assemblies, reported by nine of the ten organizations. In only one school did the home-room teacher help the student plan his junior-college program.

Classification of guidance programs.

—All administrators in the high-

association schools maintained that their junior-college guidance programs were part of a unified program including the high school; all those in the moderate-association group reported that their programs worked in voluntary co-operation with the guidance programs in the high school; and the administrators in the independent schools listed their programs as inde-

respect to degree of integration, and the independent group ranking last.

EVALUATION OF VARIOUS TYPES OF GUIDANCE PROGRAMS

Retention.—One measure of the relative efficiency of student personnel programs would be the degree of retention between Grades XIII and XIV. The data used for showing this

TABLE 9
COMPENDIUM OF DATA ON VARIOUS FEATURES OF INTEGRATIONAL ASPECTS OF GUIDANCE PROGRAMS IN THREE GROUPS OF JUNIOR COLLEGES

FEATURE OF GUIDANCE PROGRAM	JUNIOR-COLLEGE GROUP		
	High-Association	Moderate-Association	Independent
1. Average percentage of time freed for dean.....	30.8	42.5	55.0
2. Percentage having one administrator responsible for program at both levels.....	100.0	25.0	.....
3. Transfer of records:			
a) Complete.....	75.0	.....	.....
b) Scholarship only.....	25.0	100.0	50.0
c) None.....	.....	.....	50.0
4. Average grade level at which junior-college programs of study are planned.....	12.25	12.50	13.00
5. Average grade level at which junior-college attendance is planned.....	11.25	11.75	12.50
6. Average number of promotional methods used on behalf of junior-college attendance with high-school students.....	3.5	2.5	1.0

pendent plans. This self-placement in degree of integration can be tested by reference to the compendium of the data describing the characteristics of the various programs presented in Table 9. Apparently the self-classifications made by the administrators are approximately correct. Accordingly the treatment of the rest of this problem will consider the high-association schools as having the most nearly unified guidance programs at the two levels, with the moderate-association junior colleges ranking second with

degree were the percentages that the Sophomore class enrolments in September, 1941, were of the Freshman class enrolments in September, 1940. These years were selected as the last relatively normal years. A longer span was not used because some of the junior colleges had made fundamental changes in organization as late as 1939. These data are presented in Table 10. The basic feature of Table 10 is the superiority of the high-association colleges over the other groups. Refinement of the evidence showed that

variations in the proportions of enrolment coming from nonlocal high schools did not affect this result.

The relative efficiency of the guidance program has an effect on the degree of retention because an effectively functioning organization will meet students' problems before they become critical and will also have an initial effectiveness with the student and thus reduce the number of such problems. It must be kept in mind, however, that curriculum organization will have an intimate relation to the guidance program. For example, a limited offering will make it impossible for the guidance personnel to advise the transfer of an unsuccessful student to other courses.

Success in change of nature of program.—The degree of success or lack of success with which students change the nature of their programs in the junior college as compared with the programs that they carried in high school throws some light on the relative effectiveness of guidance programs. These data were studied only for those junior-college graduates who were also graduates of the local high school.

An average mark of below 2.0, or C, was arbitrarily assumed to indicate a lack of success. For each graduate the investigator formulated a description of the dominant characteristics of both the high-school and the junior-college programs of studies. For example, one high-school program might be described as "commercial major"; another, as "general, with emphasis

on mathematics and science." If the first program was followed by one including no courses in commerce at the junior-college level, the nature of the course was considered as having been changed. If the student following the second program took the pre-engineering course in junior college, he was considered as not having changed the nature of his course in junior college.

TABLE 10

PERCENTAGE THAT ENROLMENT IN GRADE XIV IN SEPTEMBER, 1941, WAS OF ENROLMENT IN GRADE XIII IN SEPTEMBER, 1940, IN THREE GROUPS OF JUNIOR COLLEGES

Junior-College Group	Enrolment in Grade XIII in September, 1940	Enrolment in Grade XIV in September, 1941	Percentage of Retention
High-association.....	499	238	47.7
Moderate-association.....	233	80	34.3
Independent.....	118	45	38.1
Total.....	850	363	42.7

If the average mark in high school was 1.9 and in junior college was 2.4, the program was classified as unsuccessful in high school and successful in junior college.

There are eight possible combinations of these criteria, ranging from the same program carried successfully in both high school and junior college to two different programs, both carried unsuccessfully in high school and junior college. Certain of these combinations are indications of inferiority or of excellence in the guidance program, while the remainder are of no

particular significance in this regard. Table 11 presents the evidence for this group of schools. A salient fact from Table 11 is the large proportion of students in the groups other than the high-association group who had had unhappy experiences in changing the nature of their programs at the junior-college level.

cating a reportable difference in the average mark.

This evidence, presented in Table 12, indicates that the percentage of students earning higher marks in junior college than they earned in high school was greater in the high-association group than the corresponding percentage in either of the other two

TABLE 11
SUCCESS IN JUNIOR COLLEGE COMPARED WITH SUCCESS IN HIGH-SCHOOL
PROGRAM FOR STUDENTS WHO CHANGED PROGRAMS IN
THREE GROUPS OF JUNIOR COLLEGES

JUNIOR-COLLEGE GROUP	NUMBER OF STUDENTS STUDIED*	EXCELLENCE IN CHANGE		DEFINITE INFERIORITY IN CHANGE		PROBABLE INFERIORITY IN CHANGE	
		Number of Students	Percent- age of Students	Number of Students	Percent- age of Students	Number of Students	Percent- age of Students
High-association.....	74	4	5.4	4	5.4	9	12.2
Moderate-association.....	38	.....	.....	1	2.6	13	34.2
Independent.....	17	1	5.9	4	23.5	4	23.5
Total.....	129	5	3.9	9	7.0	26	20.2

* All graduates of class of 1942 who were also graduates of the local public high school.

Success as measured by average marks.—The average mark of the student in his junior-college program as compared with his average mark in high school is a further measure of degree of success. The procedure here consisted in averaging all high-school marks for each student and comparing that figure with the average of all his junior-college marks, the latter being weighted in accordance with the semester-hour values of the courses. The point scale of 4 for a mark of A, 3 for a B, etc., was used, and a difference of 0.3 was selected as the point indi-

groups. The difference is much more outstanding, however, in the percentages of students earning lower marks in junior college as contrasted with their high-school marks. The proportion of these unsuccessful situations in the high-association junior colleges is a sixth that found in the moderate-association schools and about a fourth that of the independent colleges. Nine-tenths of all students in the high-association group earned the same or higher average marks in junior college compared with those which they earned in high school. The cor-

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responding figure is only 39.5 per cent in the moderate-association group and 64.7 per cent in the independent group. Three-fifths of all students in the moderate-association junior colleges lost in average mark, and nearly three-eighths of those in the independent group did likewise.

Further refinement of these data by dividing the students into two groups

college students and does other advising, the proportion of his time spent on these functions was determined, along with that of other officers. Comparison of the total allotments of time with the junior-college enrolment resulted in an average student-adviser ratio of 459.9 for the high-association group, 151.3 for the moderate-association group, 123.5 for the independent

TABLE 12

COMPARISON OF AVERAGE MARKS EARNED BY STUDENTS IN THREE GROUPS OF JUNIOR COLLEGES WITH AVERAGE MARKS EARNED BY SAME STUDENTS WHILE IN LOCAL PUBLIC HIGH SCHOOL

JUNIOR-COLLEGE GROUP	STUDENTS MAKING HIGHER MARKS IN JUNIOR COLLEGE		STUDENTS MAKING SAME MARKS IN JUNIOR COLLEGE		STUDENTS MAKING LOWER MARKS IN JUNIOR COLLEGE		TOTAL	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
High-association.....	28	37.8	39	52.7	7	9.5	74	100.0
Moderate-association	6	15.8	9	23.7	23	60.5	38	100.0
Independent.....	4	23.5	7	41.2	6	35.3	17	100.0
Total.....	38	29.5	55	42.6	36	27.9	129	100.0

with average high-school marks above or below 2.7 shows the same trends operating in both groups. Thus the implications of this evidence are not affected by variations among the various groups in the average high-school marks of their junior-college students.

Ratio of number of students to advisers.—A tabulation was made of the officers performing guidance functions at the junior-college level and the percentage of time allocated to this work. In the high-association junior colleges, where the high-school principal typically registers incoming junior-

group, and 269.2 for all groups combined. Thus the high-association group had an average student-adviser ratio of more than three times that of the other groups. This result indicates an economy, not only in cost, but also in efficiency, since, on the basis of the evidence given up to this point, the organization represented by this figure has produced more effective results than have the other organizations.

Summary of measures of evaluation.—The high-association junior colleges have the highest degree of retention, have the most successful student pro-

grams in junior college as compared with the high-school programs for the same students, and are the most economical and efficient in student-adviser ratios. There is little significant difference between the other two groups on these measures. This lack of difference between the moderate-association and the independent groups suggests that the term "voluntary co-operation," as applied to the relationship of the high-school and junior-college guidance programs by the moderate-association junior-college administrators, may be a misnomer. Voluntary co-operation, to be genuinely effective, must be thoroughly implemented. The problems of guidance at the two levels should not be left on this opportunistic basis. The evidence shows that a definitely unified guidance program is necessary to bring the desired results.

The reason for the superiority of the unified guidance programs may come from the greater efficiency in guidance resulting when personnel and records move with the student into junior college. This practice enables advisement based on previous experiences, whereas a new guidance organization must live through an exploratory period, when it is not able to operate so definitively with the student. The student has completed much of his two-year junior-college program before the separate guidance organization attains the level of knowledge and judgment regarding him reached by the guidance organization operating with

him in his Junior and Senior years of high school.

REORGANIZATION AND THE GUIDANCE PROGRAMS

The high-association schools already approach the major elements of a unified guidance program. Two of them had a guidance director operating in Grades X-XIV. In a complete integration, these schools would need to refine the duties of this official, expand his or the associated counselors' activities at the junior-college level, and abandon the assignment of any guidance officer to Grades XIII and XIV only. The other two high-association schools have established a large number of unified guidance practices so that the basic philosophy of integration in guidance would be readily accepted. They need the creation of a guidance officer with vertical responsibility as the most important single step remaining before guidance integration—a step which will not require an additional officer since it can be accomplished by a reassignment of duties using the present assistant principal and junior-college dean.

In summary, two of the high-association junior colleges now have a guidance organization immediately suitable for incorporation into a 6-4-4 reorganization. Reorganization, from the same standpoint, is readily feasible in the other two high-association schools although not to the same extent.

The moderate-association guidance

programs are more feasible for reorganization than are those of the independent schools since the former already enjoy combined housing. The evidence has demonstrated that voluntary co-operation in the guidance programs does not achieve significantly higher results than do the independent guidance programs. Unification of the guidance programs at the two levels will eventuate only under the establishment of the single-administration pattern unless the superintendent were to remove guidance from the ordinary scope of administration and assign responsibility for guidance at both levels to one official. In addition, these schools must develop a guidance personnel operating at both levels and must introduce planning for Grades XIII and XIV as an integral part of the guidance program in the lower secondary-school grades.

The same description applies to the guidance programs of the independent

group except that these schools must overcome the additional hurdle of changing from separate to combined housing. The moderate-association and the independent groups of junior colleges are not now organized to perform the guidance function in a reorganized four-year junior college, but, when the advantage of the unified guidance programs is reviewed, the need and thus the feasibility of unification in guidance in these six schools is heightened.

In conclusion, we find once again that, with respect to guidance, the degree of feasibility for reorganization presents a pattern, in which the high-association schools are almost immediately ready for reorganization, the moderate-association colleges are the second in readiness, and the independent junior colleges are the least ready. This same pattern was found in most of the other areas of organization studied.

RECREATION AND DELINQUENCY

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AN AROUSED public interest in the field of recreation and delinquency throughout the United States since the advent of World War II has truly verified a statement made by the Advisory Committee on Education in 1939, when it stated "in no other field of human endeavor is the ounce of prevention worth so much" (8: 86). Perhaps even more significant were the various emergency programs initiated during the war years, which pointed up in no uncertain manner our lack of adequate recreational opportunities and subsequently stimulated the development of new and valuable methods of making provisions for recreation.

Steiner has estimated that the total annual cost of recreation in the United States during the decade ending in 1930 amounted to \$10,165,857,000. An amount approximating \$883,071,000 was spent for games, sports, outdoor life, and other forms of recreation which are essentially the activities of physical education (9: 183). There is reason to believe that these figures were dwarfed by the amounts expended during the war years. Yet we may question whether the financial disbursements for recreation have yielded the expected returns in solving the problem of juvenile delinquency!

We might even inquire whether the amounts appropriated are proving effective in combating what appears to be a laxity in the promotion of adequate recreational facilities.

That recreation has been a neglected orphan and has even been considered a fad or frill in some states, from the standpoint of organization, administration, and supervision, is amply supported.

In the Maryland survey . . . 13,528 youth 18 to 24 years of age were asked if they regarded facilities for community recreation adequate. Of the youth who believed that recreational facilities were inadequate, 28 per cent reported that they should most like to see their communities add parks and playgrounds to their recreational programs, 20 per cent expressed a preference for community centers, and 16 per cent wanted swimming pools. Smaller percentages wanted movies, cultural and educational facilities, dance halls, clubs, and more supervision [8: 85].

There is no doubt that the sudden shifting from war to peace has increased the problems concerned with youth. World War II did not solve youth's problems; it merely postponed them. Now that we are faced with the rapid growth of technological advancements—a machine age that will increase the leisure time of adults and of the teen-agers—the wise use of

leisure time presents a dilemma necessitating prudent guidance. The following statement, made in the report of a study of a thousand juvenile delinquents, is significant in this connection:

A constructive, healthful use of leisure, particularly in childhood and early adolescence, is quite as important to the future of the developing individual as the time devoted to studies and other duties. Hence it is most disturbing to note that over nine-tenths of our delinquent boys had spent their spare time harmfully and that only thirty-eight had neither undesirable companions nor vicious habits. Associated with this is the fact that three-fourths of the delinquents had never been members of well-supervised recreational or vocational groups [4: 108].

If we assume that during the war years we achieved the level of national effort necessary to bring a united citizenry to the heights of great accomplishment, so in this postwar period recreational experiences can integrate personalities which are now passively motivated by peace, unemployment, and increased leisure time. The continued choice of that which is easier will, in the end, lead to a life of futility rather than one of satisfaction.

Of all the ages of life, youth is the time when energy, idealism, and interest in other people can be captured most readily for constructive purposes. It is, accordingly, the period when the greatest effort should be invested in facilitating the best use of leisure time.

Judging from conditions following World War I, we may expect a marked increase in juvenile delinquency dur-

ing the present postwar era. J. Edgar Hoover, chief of the Federal Bureau of Investigation, in an address reported in the newspapers, stated that a major crime wave is in the making, with juveniles taking the lead. He laid on adults the blame for the development of "kid gangsters" because it has become unpopular for parents to take an interest in what their children are doing after school and because adults fail to treat youth in an adult manner.

Citing figures on the increase in juvenile delinquency since 1939, Hoover explained that persons under twenty-one commit 15 per cent of all murders, 36 per cent of all robberies, and 51 per cent of all burglaries. Thirty per cent of all rapists are under that age, and minors make up 34 per cent of the thieves, 26 per cent of the arsonists, and 62 per cent of all car thieves. Arrests of "bobby-sox" girls under eighteen years of age have jumped 198 per cent since 1939, while arrests of boys in the same age group increased 48 per cent for homicide, 70 per cent for rape, 72 per cent for assault, 55 per cent for automobile thefts, and 101 per cent for drunkenness and drunken driving.

A bulletin recently issued by the National Commission for the Defense of Democracy through Education cites the year-by-year increase in juvenile cases disposed of by sixty-nine courts from 1938 to 1944. Table 1 summarizes the results. The Commission further reports that, in areas where population increased (usually areas of war activity), the increase in

the number of juvenile-delinquency cases disposed of was greater than that in areas where population declined, as shown by the figures presented in Table 2 for 1940-43 from

TABLE 1

CASES OF JUVENILES DISPOSED OF BY 69
COURTS SERVING POPULATION AREAS OF
100,000 OR MORE IN 1938-44 (7:8)

Year	Total Number of Cases	Number of Cases of Boys	Number of Cases of Girls
1938.....	48,226	40,581	7,645
1939.....	52,485	44,766	7,719
1940.....	50,426	42,171	8,255
1941.....	54,282	44,804	9,388
1942.....	58,421	47,035	11,386
1943.....	77,286	62,803	14,483
1944.....	75,063	61,159	13,904

eighty-two courts. In the thirty-nine areas where population increased, the number of cases disposed of rose 55 per cent between 1940 and 1943, in contrast with an increase of 44 per cent in the forty-three areas where population decreased (7: 8). A news item printed in November, 1945, reports: "A decline in juvenile delinquency is noted in court statistics for the first time since the start of the war. Data from 225 courts show an over-all drop of 5 per cent for 1944 under 1943. Figures for 1944 are still up 56 per cent over the figure for 1938" (5: 84).

The National Commission reaffirms its conviction that schools, if properly organized and supported, are the strongest preventive agencies against juvenile delinquency. The Commission urges that, both in public meetings and through contacts with

civic leaders, teachers and teacher organizations stress the necessity of good schools in any community program for dealing with juvenile delinquency (7: 8). Bobbitt maintains that there are really no extra-curriculum activities, that all the child does is his curriculum and is related to his growth and education (1: 257-66).

Another national organization, the National Commission on Children in Wartime, has published its recommendations in a carefully worded pamphlet titled *Building the Future for Children and Youth*. In addition to urging federal support for education, the Commission advocates the setting-up, by both states and communities, of continuing councils on children and youth, working closely with general planning agencies, to promote and assist in the development of sound social policies and services (6).

TABLE 2

JUVENILE-DELINQUENCY CASES DISPOSED OF
BY 82 COURTS SERVING POPULATION AREAS
OF 100,000 OR MORE IN 1940-43 (7:8)

Area	1940	1941	1942	1943
39 areas that increased in population 1940-43...	42,055	44,996	49,222	65,052
43 areas that decreased in population 1940-43...	21,368	23,292	23,983	30,726
All areas.....	63,423	68,288	73,205	95,778

Ewerz states that "one of the most successful means of combating the problem is a well-rounded school and community program for youth. Provisions for wholesome social and recre-

ational activities in the school and in the community will do much toward stemming the tide of juvenile delinquency which seems to be mounting in all sections of our country" (3: 31-32).

A ten-point program covering young people's rights, prepared and developed by a group of experts of the Jewish Board of Guardians, a child-guidance and delinquency-prevention agency of New York City, was recently condensed in the publication *Clearing House* as follows (10: 44).

1. The right to let childhood be forgotten.
2. The right to a "say" about his own life.
3. The right to make mistakes, to find out for himself.
4. The right to have rules explained, not imposed.
5. The right to have fun and companions.
6. The right to question ideas.
7. The right to be at the romantic age.
8. The right to a fair chance and opportunity.
9. The right to professional help whenever necessary.
10. The right to struggle toward his own philosophy.

If adults discern the interests and needs of youth and can foresee that the task ahead involves the indispensable necessity of understanding and planning, accompanied by some concrete action on the part of the adult population, the so-called "inevitable unrest and dissatisfaction" of our present-day youth can, in some measure, be forestalled. Burns has warned us that "civilization may depend for its roots upon the way in

which work is done; but it depends for its finest flower upon the use of leisure" (2: 240).

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10. "A Teen Age Bill of Rights," *Clearing House*, XX (September, 1945), 44.

SELECTED REFERENCES ON STATISTICS, THE THEORY OF TEST CONSTRUCTION, AND FACTOR ANALYSIS

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THE following bibliography, which is presented below, has been selected from issues of educational and psychological journals from March, 1945, to March, 1946, inclusive. Sharp distinctions do not exist between the fields covered in this list, but, as an assistance to the student with special interests in one or more of the fields, the references have been classified under the following categories: theory and use of statistical methods, problems of test construction, and factor analysis. No articles dealing primarily with the use of tests have been included because these items are distributed functionally in other lists in the cycle, such as those dealing with secondary-school instruction, guidance, etc.

THEORY AND USE OF STATISTICAL METHODS

418. BROGDEN, HUBERT E. "On the Interpretation of the Correlation Coefficient as a Measure of Predictive Efficiency," *Journal of Educational Psychology*, XXXVII (February, 1946), 65-76.

Discusses the efficiency of prediction as a linear function of the correlation between the dependent and the independent variables. Includes a criticism of other functions of the correlation commonly used for this purpose.

419. FILE, QUENTIN W. "A Machine Method for Computing the Critical Ratio of the Difference between Means," *Journal of Educational Psychology*, XXXVI (March, 1945), 184-86.

The formula for the critical ratio of the difference between two uncorrelated means is written in terms of raw scores for the case where the samples contain the same number of cases.

420. FISKE, DONALD W., and DUNLAP, JACK W. "A Graphical Test for the Significance of Differences between Frequencies from Different Samples," *Psychometrika*, X (September, 1945), 225-29.

Describes a graphical method for testing the significance of differences between observed frequencies in case a large number of differences are to be studied for the same samples.

421. HOYT, CYRIL. "The Principle of Likelihood as a Basis for Tests of Significance," *Journal of Experimental Education*, XIII (March, 1945), 136-44.

Derives criteria appropriate for testing the significance of four types of statistics, following the Neyman and Pearson "principle of likelihood."

422. JARRETT, R. F. "On the Permissible Coarseness of Grouping," *Journal of Educational Psychology*, XXXVI (October, 1945), 385-95.

Points out the effect of grouping upon the sampling distribution of means. Explains how one can determine in advance the number of class intervals to employ.

423. JASPEN, NATHAN. "Serial Correlation," *Psychometrika*, XI (March, 1946), 23-30.

Gives the development of formulas for serial correlation which are used when a qualitative series is converted to a quantitative one by representing the data on a normal scale.

424. JOHNSON, PALMER O., and TSAO, FEL. "Testing a Certain Hypothesis Regarding Variances Affected by Means," *Journal of Experimental Education*, XIII (March, 1945), 145-48.

Describes a procedure for testing the homogeneity of the variances of several groups after allowance is made for the variation in the means of the groups.

425. JOHNSON, PALMER O., and TSAO, FEL. "Factorial Design and Covariance in the Study of Individual Educational Development," *Psychometrika*, X (June, 1945), 133-62.

A numerical example is employed to illustrate the application of the method of covariance to an investigation of individual educational development. The first part of the report presents the analysis and interpretation. The second part presents the necessary formulas.

426. KAITZ, HYMAN B. "A Comment on the Correction of Reliability Coefficients for Restriction of Range," *Journal of Educational Psychology*, XXXVI (November, 1945), 510-12.

Gives several variants of the formulas, each to be employed under certain conditions.

427. PETERS, CHARLES C. "A New Descriptive Statistic: The Parabolic Correlation Coefficient," *Psychometrika*, XI (March, 1946), 57-69.

This article proposes "a new descriptive statistic related to the second-order parabola in the same manner in which the familiar correlation coefficient is related to regression coefficient."

428. SCHULTZ, FRANK G. "Recent Developments in the Statistical Analysis of Ranked Data Adapted to Educational Research," *Journal of Experimental Education*, XIII (March, 1945), 149-52. Presents and illustrates with numerical data the "analysis of variance of ranks," a method proposed for use with data which are not normally distributed or which are qualitatively measured.

429. SWINEFORD, FRANCES. "Graphical and Tabular Aids for Determining Sample Size When Planning Experiments Which Involve Comparisons of Percentages," *Psychometrika*, XI (March, 1946), 43-49.

Charts are presented to aid in evaluating percentage differences in case the percentages are based on equal groups. A table is included for use with unequal groups.

PROBLEMS OF TEST CONSTRUCTION

430. DE BERNARDIS, AMO, and LANGE, PHIL C. "An Outline Chart on Types of Tests," *Journal of Educational Research*, XXXVIII (April, 1945), 612-16.

Presents a three-page chart which summarizes the advantages and the limitations of various types of tests, together with suggestions for their construction and use. The chart is designed to serve classroom teachers, supervisors, and principals.

431. DICKENSON, HENRY F. "Identical Errors and Deception," *Journal of Educational Research*, XXXVIII (March, 1945), 534-42.

Indicates a means of employing scores on a multiple-choice test to detect collaboration among the subjects.

432. EISENBERG, PHILIP. "Two Methods of Combining Attitudes of Like, Indifference, and Dislike into One Score," *Journal of Applied Psychology*, XXIX (June, 1945), 246-51.

A comparison of two methods of scoring attitude scales is made in terms of the interpretations suggested by the results.

433. FARNSWORTH, PAUL R. "Attitude Scale Construction and the Method of Equal Appearing Intervals," *Journal of Psychology*, XX (October, 1945), 245-48.
Questions the assumption that judges actually do regard the scale steps as equally spaced when they employ the equal-appearing-intervals technique in constructing attitude scales.
434. GOLDSTEIN, HARRY. "A Malingering Key for Mental Tests," *Psychological Bulletin*, XLII (February, 1945), 104-18.
Describes the construction of a scoring key to detect malingerers among individuals who fail a test. Evidence is provided of the validity of such a key.
435. GULLIKSEN, HAROLD. "The Relation of Item Difficulty and Inter-item Correlation to Test Variance and Reliability," *Psychometrika*, X (June, 1945), 79-91.
Derives the conditions which must be met in order to maximize the reliability and the variance of a test.
436. KAITZ, HYMAN B. "A Note on Reliability," *Psychometrika*, X (June, 1945), 127-31.
Develops a general formula for estimating test reliability when test items are weighted and an item analysis is available.
437. MOSIER, CHARLES I., MYERS, M. CLAIRE, and PRICE, HELEN G. "Suggestions for the Construction of Multiple-Choice Test Items," *Educational and Psychological Measurement*, V (Autumn, 1945), 261-71.
A number of practical suggestions are offered to aid in the construction of multiple-choice test items.
- FACTOR ANALYSIS
438. CARLSON, HILDING B. "A Simple Orthogonal Multiple Factor Approximation Procedure," *Psychometrika*, X (December, 1945), 283-301.
Offers a procedure for approximating orthogonal multiple factors. Results obtained by this procedure are compared with published results obtained by other methods.
439. HALL, D. M., WELKER, E. L., and CRAWFORD, ISABELLE. "Factor Analysis Calculations by Tabulating Machines," *Psychometrika*, X (June, 1945), 93-125.
A detailed description, with numerical illustration, of the use of I.B.M. tabulating equipment in connection with multiple-factor analysis.
440. HALSTEAD, WARD C. "A Power Factor (P) in General Intelligence: The Effect of Brain Injuries," *Journal of Psychology*, XX (July, 1945), 57-64.
An analysis of thirteen tests administered to fifty neuropsychiatric patients. Discusses biological interpretation of a "power factor."
441. HELLFRITZSCH, A. G. "A Factor Analysis of Teacher Abilities," *Journal of Experimental Education*, XIV (December, 1945), 166-99.
Employs methods of factorial analysis in two studies in order to determine "the number and kinds of factors common to some twenty-five measures of teacher abilities."
442. HOWIE, DUNCAN. "Aspects of Personality in the Classroom: A Study of Ratings on Personal Qualities for a Group of Schoolboys," *British Journal of Psychology*, XXXVI (September, 1945), 15-28.
Presents and compares five factor analyses of ratings on sixteen personality traits for 295 boys.
443. HSÜ, E. H. "A Factorial Analysis of Olfaction," *Psychometrika*, XI (March, 1946), 31-42.
Analyzes twenty-one reagents which were rated on a pleasantness scale by 182 subjects.
444. HSÜ, E. H., and SHERMAN, MANDEL. "The Factorial Analysis of the Electro-

- encephalogram," *Journal of Psychology*, XXI (January, 1946), 189-96.
Twenty-two variables, selected from the electroencephalograms of 110 individuals, are subjected to factor analysis in an attempt to quantify this type of record.
445. MARZOLF, STANLEY S., and LARSEN, ARTHUR HOFF. "Statistical Interpretation of Symptoms Illustrated with a Factor Analysis of Problem Check List Items," *Educational and Psychological Measurement*, V (Autumn, 1945), 285-94.
An illustration of "how syndromes may be conceived of in terms of factor analysis." Ten items from a check list given to 205 students are analyzed.
446. THURSTONE, L. L. "A Multiple Group Method of Factoring the Correlation Matrix," *Psychometrika*, X (June, 1945), 73-78.
Describes by means of matrix notation the method for simultaneous extraction of several correlated factors, which was first described by Karl J. Holzinger in his article, "A Simple Method of Factor Analysis," *Psychometrika*, IX (December, 1944), 257-62 (Reference 454 in the June, 1945, issue of *School Review*).
447. THURSTONE, L. L. "The Effects of Selection in Factor Analysis," *Psychometrika*, X (September, 1945), 165-98.
Detailed discussion of the effects on factorial results of selection of subjects and selection of tests.
448. THURSTONE, L. L. "Factor Analysis and Body Types," *Psychometrika*, XI (March, 1946), 15-21.
Presents a factor analysis of twelve anthropometric measures.
449. WITTENBORN, J. R. "Mechanical Ability, Its Nature and Measurement: I. An Analysis of the Variables Employed in the Preliminary Minnesota Experiment," *Educational and Psychological Measurement*, V (Autumn, 1945), 241-60.
Discusses the use of factor analysis to determine the nature of mechanical ability as measured by twenty-six tests.
450. WOODROW, HERBERT. "Intelligence and Improvement in School Subjects," *Journal of Educational Psychology*, XXXVI (March, 1945), 155-66.
Presents factor analyses based on the inter-correlations of gains in scores made in one year or longer on the Metropolitan Achievement Tests. Battery administered to three groups of subjects.
451. ZIMMERMAN, WAYNE S. "A Simple Graphical Method for Orthogonal Rotation of Axes," *Psychometrika*, XI (March, 1946), 51-55.
A detailed description of the construction and use of special apparatus by means of which 12-15 rotations of pairs of axes involving 20 test variables can be completed per hour.

Educational Writings

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REVIEWS AND BOOK NOTES

THE DEVELOPMENT OF STANDARDS IN SECONDARY AND HIGHER EDUCATION.—As long as the academy remained prominent as a secondary school in America, the early high school was not deeply concerned with standards, since the college-preparatory function was performed largely by the academy. However, as the academy declined and the high school began to assume the college-preparatory function, in addition to offering a general useful education above the elementary level, the question of standards became a serious problem. Because the system of college-entrance examinations did not prove entirely satisfactory, there gradually evolved the idea that colleges and secondary schools could co-operate in the development of acceptable curriculums and in the setting-up of mutual standards. Thus in 1885 the New England Association of Colleges and Preparatory Schools was formed for the promotion of common interests. Then in 1887 the College Association of Pennsylvania, which, after changing its name several times, finally became the Middle States Association of Colleges and Secondary Schools, was organized. These two were followed by the formation of the North Central Association in 1895, the Association of Colleges and Secondary Schools of the Southern States also in 1895, and the Northwest Association of Secondary and Higher Schools in 1918. All parts of our country are now served by one or another of these associations.

A recent book¹ presents the development

¹ Calvin Olin Davis, *A History of the North Central Association of Colleges and Secondary Schools, 1895-1945*. Ann Arbor, Michigan: North Central Association of Colleges and Secondary Schools, 1945. Pp. xviii + 286.

of the largest, and the most active, of these associations, the North Central Association of Colleges and Secondary Schools, which now covers twenty states. This history fills a distinct place in the development of a more complete understanding of the struggles in the evolution of standards in both secondary schools and colleges and of how the high schools were called on to resist more or less complete domination by the colleges. These problems have been particularly acute in the United States, because of the local control of education. In most European countries, where education is largely controlled by the central government, the standards and regulations are usually set up by the national minister of education. However, in the United States, where we now have forty-nine systems of education, the development of any sort of common educational standards must be set up by voluntary and extra-legal means. The associations just referred to have taken over this function to a large extent for secondary schools and colleges. Thus rather high common standards have been attained—slowly, to be sure—in a voluntary and democratic manner which is in keeping with our democratic political philosophy. Even the courts have upheld the enforcement of the standards set up by the associations.

Dr. Davis is highly qualified to write this history. He held office in the North Central Association from 1911 to 1942—a period of thirty-one years, fifteen of which were spent as managing editor of the *North Central Association Quarterly*. Then, too, he has had complete access to all the Association's records.

He has taken an approach which is probably the best that could be followed in this

type of historical study. The first two chapters deal with the establishment and the early years of the Association. The remaining chapters deal with the development of the functional aspects or problems of the organization. The titles of the more important chapters are "Development of the Constitution," "Accrediting Policies," "Publications and Publication Policies," "The Work of the Commissions," "The Executive Committee and the Association as a Whole," "The Finances of the Association," and "Fraternal Relationships and Social Diversions." Following the final summary chapter, there are presented important appendix materials, such as the names of the Association's most important leaders of the past, a comparative table of receipts and expenditures, a chronological picture of accredited institutions, and a list of reports of objective studies either sponsored by, or relating to, the Association. All these aspects and problems are dealt with chronologically, so that the evolution and growth of each are shown. In addition, one chapter presents excerpts of addresses delivered at the annual meetings throughout the years. These educational gems are arranged in relation to the following topics: general values, aims, and outcomes; college and university affairs; secondary-school problems and goals; curriculum matters; teaching viewed as a profession; and standardization policies. The list of the men from whose addresses these excerpts were taken constitutes an important fraction of *Who's Who in American Education* during the period of this history.

Davis summarizes the trends by periods, as reflected in the changing emphases receiving attention during the fifty years of the life of the Association: first, the clarification of general educational principles; second, the formulation of uniform standards and the accreditation of schools and colleges in conformity with these standards; third, curriculum problems; fourth, statistical analyses; fifth, the re-evaluation of aims and objectives; and fifth, co-operative efforts with

other regional and national educational agencies. Although most of the problems receive more or less continuous attention, yet these emphases represent the "new shoots from the same stem."

This publication makes a definite contribution to an understanding of the history of secondary and higher education in an important section of America. The other four regional standardizing agencies might well emulate the North Central Association's example in presenting this history. Only then could a genuine critical history of the rapid expansion of secondary and higher education of all America during the last fifty years be written.

JOHN A. NIETZ

University of Pittsburgh

THE SOCIAL WORLD OF THE ADOLESCENT.

—In explaining the forces behind the development and socialization of the adolescent, the author of a volume¹ dealing with youth problems leans heavily on the molding influence of social experiences. The point is stressed that past research on adolescence has placed too much emphasis on the physiological aspects of human development, too little on the social and psychological aspects. A great deal is to be gained, this author asserts, from an understanding of the social world in which adolescents function and from a knowledge of how interaction within that world affects the transition of the adolescent into adulthood.

The discussion is divided into five parts. Part I defines the adolescent-youth group and considers the problems of the adolescent in relation to three conditioning factors: biological foundation, social structure, and personality development. Part II considers the development of moral maturity and the learning of the moral codes of our society. Part III deals with the transition to adulthood and discusses the influence of the home

¹ Paul H. Landis, *Adolescence and Youth: The Process of Maturing*. New York: McGraw-Hill Book Co., Inc., 1945. Pp. xiv+470. \$3.75.

and family, adjustments to sex, and the selection of a marital partner. The struggle for economic adulthood is discussed in Part IV, and the function of the school in relation to adolescents is the topic of Part V.

Landis has undertaken the much-needed task of summarizing and portraying the social and cultural influences within the framework of which American youth must live and develop. He has missed few areas of these social influences and has made his discussion functional by recognizing the distinctive characteristics of the urban, the town, and the rural social environment.

However, the total impression given by this volume is one of slight confusion. The book appears to lack an underlying directive that would give it coherence and purpose. In its very comprehensiveness, it gives less the impression of a completed book on adolescence than an impression of a collection of reading notes and ideas out of which a book (or two) might eventually be crystallized. It is, further, highly repetitious in its coverage of topics.

Moreover, Landis has strained too hard to remedy in one effort the usual underemphasis placed on social influences in human development. In so doing, he has left the reader with an illusion of a social whirl of influences, institutions, demands, mores, not necessarily related to one another and not clearly related to the adolescents who participate in them. Nowhere does one gain insight into the developing adolescent but only into the presence of social forces. The individual is smothered in society and is reduced to a small residue of physiologically determined tendencies. In the last analysis, Landis seems to say, the individual can be only the pawn of society. The author implies that, if the individual accepts society as it is "dished out" to him, he becomes the responsible, respected, law-abiding citizen; if he does not, he becomes the delinquent, criminal, misfit, neurotic, or rebellious individual. It is difficult to accept so fatalistic a conception.

The author feels, justifiably, that the

school plays a role of great importance in socializing the individual and that it is often asked to compensate for the failures of other social institutions. Thus, in many instances the modern school must counterbalance the unhappy home. The teacher must become a confidant and take special care of those children who come from broken homes. In many cases the school must provide a core of moral teaching because parents, confused in their own moral lives, have failed to do so. It must sometimes give sex instruction because some parents are ignorant, careless, or fearful. The school must teach habits of regularity and responsibility, develop habits of industry, build a regard for religion, inculcate respect for the aged, supervise increasing amounts of leisure time, and provide vocational guidance. The author does not, however, indicate the manner in which the school is to discharge these responsibilities. Only the necessity for vocational guidance is discussed in any detail.

Three other points should be mentioned. First, the discussion of social status and social mobility is quite inadequate and indicates a lack of consideration of much recent research on the problem. Second, the discussions of personality and the processes of personality formation suffer from being far too static and depersonalized. Third, in the chapters on moral maturity the author loses his usual scientific objectivity and gives a lecture on middle-class morals.

In spite of the lack of a functional concept of the interaction between the individual and society and in spite of the depersonalized and lifeless feeling of the book, Landis has collated much pertinent material and has strongly emphasized the need for more extensive consideration of society's part in the socialization process. The book could be read with profit both by the professional teacher and by the intelligent layman, either of whom would obtain an increased awareness of the social demands made on us all.

WILLIAM E. HENRY

University of Chicago

PROMOTING CULTURAL DEMOCRACY.—

The press, the radio, and the forum provide continuing reminders of the persistence of barriers to unity of purpose and procedure in intergroup relationships in communities as well as among nations. That these barriers are reflected in the society of American high schools is the daily observation of teachers in many localities. The promotion of cultural democracy through the associational experiences of youth as students in the secondary-school period is generally accepted as a worthy educational endeavor. The problem of the teacher is how the experiences of youth enrolled in the school can be directed more certainly toward the goal of intercultural understanding. The volume¹ here described provides helpful suggestions for teachers and principals who are interested in methods of preventing intergroup conflicts within their schools.

This discussion is based on the author's experience of more than two decades of direct or consultative association with intercultural-education projects in about a hundred high schools. The characteristic procedure of these projects was the use of school assemblies as the medium of informative and dramatic presentations of distinctive features of the cultural heritage of different racial groups. In this manner the intercultural project served the desirable educational function of bridging the gap between the school and the community, as well as the specific objective of breaking down the barriers of prejudice which so commonly prevail whenever the customs and traits of one group are in distinguishable contrast with those of their associates.

The projects were planned on the assumption that the school is the most available social institution for correcting those traditional attitudes on which discriminatory practices are founded. The role of the schools in the elimination of intercultural conflicts,

the author asserts, "is to start the long-term process of planting and nurturing seeds of understanding which take time for growth" (p. xii). Accordingly teachers must be trained to provide adequate guidance for youth in relation to intercultural problems. A significant contribution of the volume is the discussion of principles of social psychology through which the programs described were oriented toward the inculcation of an appreciation of cultural differences within the school population as the basis of future growth in intercultural amity.

The volume furnishes strong motivation and describes tested procedures for promoting cultural democracy by means of activities which can be appropriately provided within the existing program of the secondary schools. The author's plea for a concerted move within the schools to prepare youth for satisfying participation in a society that is culturally democratic is timely and, in the main, soundly supported. Some readers will be disappointed to find an occasional note of unwarranted disparagement of our country's previous attainment in the assimilation of immigrant cultures, as, for example, "Our diversity as yet has been expressed for the most part in intolerance, tensions, and conflict" (p. 6); or, "Yet none of us can doubt our ability to pull ourselves together at this eleventh hour" (p. 2). But this is not the major theme. The book is well designed to provide effective guidance in relation to an important problem in secondary education in many American communities.

NELSON B. HENRY

University of Chicago

PRACTICAL MATHEMATICS IN SIMPLE LANGUAGE.—Technological development has crept into everyday life, demanding of all an understanding of fundamental mathematical principles and adequate skill in the application of these principles.

An up-to-date textbook² designed for the

¹ Rachel Davis Du Bois, *Build Together Americans: Adventures in Intercultural Education for the Secondary School*. New York: Hinds, Hayden & Eldredge, Inc., 1945. Pp. xviii + 270. \$2.00.

² Harl R. Douglass and Lucien B. Kinney, *Senior Mathematics*. New York: Henry Holt & Co., 1945. Pp. x + 438. \$1.52.

secondary-school level has integrated the fundamentals of arithmetic, algebra, geometry, and trigonometry, placing emphasis on accuracy and on practical phases of each subject. Definitions are given in nontechnical terms to enable students who have not previously studied secondary-school mathematics to master the use of formulas and equations of elementary mathematics. At the same time more abstract and difficult material is offered for advanced students and rapid workers.

One outstanding feature is the emphasis on mastery. Twelve "inventory tests" stressing fundamental arithmetical skills are spaced throughout the book. The last chapter presents a diagnostic and remedial program, beginning with simple addition and subtraction of whole-number combinations and continuing to problems in fractions, percentage, and interest.

Another feature is the successful attempt to apply mathematical devices to problems in modern life. A formula is introduced for its practicability and not for the sake of presenting another memory exercise. Algebraic skills are applied to problems in physics; geometric formulas are put to use in carpentry and navigation; and trigonometric functions are used to solve surveying problems.

The Appendix contains various formulas not found in many books of this sort. They are drawn from the scientific world and deal with problems in temperature, velocity, electricity, leverage, etc., and they are applied to practical situations.

Because the authors consider accurate measurement important in vocational life and in the management of the home, they have emphasized precision instruments and

time-saving devices. The vernier caliper is well explained, and directions are given for the construction of a simple model. A table of logarithms is furnished in the second chapter, with instructions on their application to simple arithmetic problems. The slide rule is also explained and put to practical use. The Appendix furnishes instructions for making a practice slide rule, and a pocket on the back cover contains printed forms for the face of a ten-inch rule which should give the student an instrument of sufficient accuracy to serve him in mastering its use in various calculations.

Arithmetic makes up a great part of the nine chapters. The first two chapters are almost exclusively arithmetical in content, although logarithms and the slide rule are introduced here. The third chapter, largely algebraic in nature, takes up formulas and equations. Percentage and interest problems and their application to the business world are considered in the next chapter. The three following chapters are geometric in content, the emphasis being placed on the solution of problems of construction, on measurement, and on the use of the right triangle. Chapter viii, concerned with home accounting, furnishes problems on insurance, home finance, and investment.

It is not the purpose of this textbook to make the student proficient in algebra, geometry, or trigonometry but rather to equip him with the skill and knowledge to solve efficiently problems that he is likely to meet at home or in the shop. It makes adequate provision for the variable interests and needs of unselected groups of high-school students.

STUART C. BROWN

Chicago, Illinois

CURRENT PUBLICATIONS RECEIVED

METHOD, HISTORY, THEORY,
AND PRACTICE

Changing Conceptions in Educational Administration. Prepared by the Society's Committee, Alonzo G. Grace (chairman). Forty-fifth Yearbook of the National Society for the Study of Education, Part II. Chicago 37: Distributed by the University of Chicago Press, 1946. Pp. x+182. \$1.75, paper; \$2.50, cloth.

Democratic Human Relations: Promising Practices in Intergroup and Intercultural Education in the Social Studies. Edited by Hilda Taba and William Van Til. Sixteenth Yearbook of the National Council for the Social Studies. Washington 6: National Council for the Social Studies (1201 Sixteenth Street, N.W.), 1945. Pp. xvi+366. \$2.00, paper; \$2.30, cloth.

JUDD, CHARLES H. *Teaching the Evolution of Civilization.* Kappa Delta Pi Lecture Series. New York: Macmillan Co., 1946. Pp. xiv+138. \$1.50.

KOOS, LEONARD V. *Integrating High School and College: The Six-Four-Four Plan at Work.* New York: Harper & Bros., 1946. Pp. viii+208. \$3.00.

The Measurement of Understanding. Prepared by the Society's Committee, William A. Brownell (chairman). Forty-fifth Yearbook of the National Society for the Study of Education, Part I. Chicago 37: Distributed by the University of Chicago Press, 1946. Pp. xii+338+vi. \$2.25, paper; \$3.00, cloth.

BOOKS FOR HIGH-SCHOOL TEACHERS
AND PUPILS

BINING, ARTHUR C., HOWLAND, ARTHUR C., and SHRYOCK, RICHARD L. *This Our World: A Pageant of World History.* New York 11: Newson & Co., 1946. Pp. xvi+664. \$2.80.

BLUMENTHAL, JOSEPH C. *Common Sense*

English, I. New York: Harcourt, Brace & Co., 1946. Pp. x+226. \$0.80.

KRUG, EDWARD, and QUILLEN, I. JAMES. *Living in Our Communities: Civics for Young Citizens.* Basic Curriculum Social Studies. Chicago: Scott, Foresman & Co., 1946. Pp. 598. \$2.64.

SERL, EMMA; LANTERMAN, ALICE; and SHEAFF, VIRGINIA. *The Story of Kansas City: The City at Work.* Kansas City, Missouri: Board of Education, 1945. Pp. 236.

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BROUGHTON, PHILIP S. *For a Stronger Congress.* Public Affairs Pamphlet No. 116. New York 20: Public Affairs Committee, Inc. (30 Rockefeller Plaza), 1946. Pp. 32. \$0.10.

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COOKE, W. HENRY. *The Teaching of International and Intercultural Understanding in the Public Schools of California: The Report of a Study Conducted under the Sponsorship of the International Center of San Francisco.* San Francisco 4, California: International Center (68 Post Street), 1946. Pp. 82.

How Children Develop: A Revision of "Child Development Study." By the Faculty of the University School. Adventures in Education, University School Series, No. 3. Columbus, Ohio: College of Education, Ohio State University, 1946. Pp. vi+80. \$1.00.

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- Greece Committee (1308 Eighteenth Street, N.W.), 1946. Pp. 64.
- NORTON, JOHN K., and LAWLER, EUGENE S. *Unfinished Business in American Education: An Inventory of Public School Expenditures in the United States*. Washington 6: National Education Association and the American Council on Education, 1946. Pp. 64. \$1.00.
- OTTO, HENRY J. *Organisational and Administrative Practice in Elementary Schools in the United States*. University of Texas Publication No. 4544. Austin, Texas: University of Texas, 1945. Pp. viii+298.
- PATTEE, RICHARD. *Catholic Life in the West Indies*. A Report of the Inter-American Committee. Pamphlet No. 37. Washington 5: Catholic Association for International Peace (1312 Massachusetts Avenue, N.W.), 1946. Pp. 64. \$0.10.
- PAULSON, BLANCHE. *The Pattern of My Tomorrow*. Self-appraisal and Careers Pamphlet No. 1. Chicago: Bureau of Child Study of the Board of Education, 1946. Pp. 62. \$0.25.
- PEIK, WESLEY E. *The Teaching Staff and Postwar Education in Red Wing*. Community Basis for Postwar Planning, No. 8. Minneapolis, Minnesota: University of Minnesota Press, 1946. Pp. iv+32.
- Regulations Relating to Credentials for Public School Service*. Bulletin of the California State Department of Education, Vol. XV, No. 1. Sacramento, California: California State Department of Education, 1946. Pp. 112.
- "School Librarians Name Their Problems." Results of a questionnaire answered by 226 members of the School Library Association of California, Southern Section, sponsored jointly by the Section's Professional Committee and the Division of Secondary Education, Los Angeles County Schools. Miscellaneous Curriculum Monograph: M-66. Compiled by Alexander Frazier. Los Angeles, California: Los Angeles County Superintendent of Schools, 1946. Pp. 14 (mimeographed).
- SCHORLING, RALEIGH, and OTHERS. *Swords into Ploughshares: What Civilian Education Can Learn from the Training Program of the Armed Forces*. Lansing, Michigan: Eugene B. Elliott, Superintendent of Public Instruction, 1946. Pp. xx+44.
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Charles Hubbard Judd

1873-1946

On July 18, 1946, Charles Hubbard Judd passed away quietly at his home in Santa Barbara, California, after four months of illness. His influence during many years of service as chairman of the Editorial Board of the SCHOOL REVIEW and the ELEMENTARY SCHOOL JOURNAL has been the major factor in making these journals what they are today. In fact, his imprint is notable throughout American education.

Mr. Judd was born in Bareilly, British India, February 20, 1873, the son of an American missionary. The family returned to America when the boy was six, and he received his school and college training in the United States, graduating from Wesleyan University in 1894. He then studied at the University of Leipzig with Wilhelm Wundt in experimental psychology.

He returned to Wesleyan University as instructor in philosophy, remaining there from 1896 to 1898. He then went to New York University as professor of psychology, serving from 1898 to 1901. In 1901-2 he was professor of psychology and pedagogy at the University of Cincinnati; from 1902 to 1909, professor of psychology and director of the psychological laboratory at Yale University. He came to the University of Chicago to head the School and Department of Education in 1909, and he remained for twenty-nine years until he reached the age of retirement.

His development of the School and the Department of Education at the University of Chicago is a lasting monument to his vision and creative efforts. His scholarly studies in educational psychology, his many publications, his membership on leading educational commissions, the variety of his advisory and consulting activities, his great popularity as educational lecturer—all testify to his large role in helping American education come of age.

Among others, his students included such well-known educators as Frank N. Freeman, dean of education at the University of California; William S. Gray and G. T. Buswell, of the University of Chicago; William A. Brownell, of Duke University; George S. Counts, of Columbia University; Homer T. Rainey, formerly president of the University of Texas; and William H. Burton, of Harvard University.

With his wide interests, extraordinary powers, and selfless devotion, the range of Mr. Judd's influence was so great that it is impossible brief-

ly to summarize his chief contributions. Three principles which he advocated and consistently exemplified illustrate his philosophy.

The first was his belief that a sound foundation for educational policy and practice must be based on facts and tested principles rather than on speculation or collections of "best practices." This view has transformed the older subject of pedagogy and is in the process of giving content and significance to work in education.

The second was his view that, if the school was to be effective, its aims and content must be derived both from a study of society and from a study of the learner and that these aims and content must be translated into concrete curriculum materials appropriate for the maturity level of the pupils. His book *PSYCHOLOGY OF SOCIAL INSTITUTIONS* was an explicit formulation of this position. During the first World War he prepared a number of pamphlets for use as reading materials in the social studies, and, under the auspices of the American Council on Education, more were written during the 1930's. In the late 1930's he developed additional materials of this sort for the National Youth Administration, and in the past few years, in co-operation with Superintendent Rudolph D. Lindquist of Santa Barbara, California, he prepared a coherent series of curriculum units in the social studies for the Santa Barbara junior high schools. The design and the purpose of these units are explained in the recently published Kappa Delta Pi Lecture, *TEACHING THE EVOLUTION OF CIVILIZATION*. This conception provides a more inclusive basis for the curriculum than does either the traditional school program or the child-centered doctrine.

The third illustrative contribution was his "tough-mindedness." Because education involves the welfare of children, many educators become overly sentimental and react in terms of emotion rather than on the basis of rational considerations. Others have developed great followings by painting such an attractive picture of educational purposes and processes that their disciples have become enamored of the beauty of the picture rather than its validity in explaining concrete situations or in guiding school practice. Mr. Judd's strict adherence to the canons of inductive and deductive logic, his willingness to face new facts that upset previous explanations, his unshaken attitude toward scientific method no matter how unpleasant the implications, represent "tough-mindedness" to an unusual degree. Only this quality can preserve the values that education as a field of study should have. A stalwart leader of education has passed on, but his influence abides.

RALPH W. TYLER

